

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

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Draft of 6th December 2023  
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# **Sūtrasthāna**







**Nidānasthāna**



# Śārīrasthāna



**Cikitsāsthāna**







# Kalpasthāna



# Kalpasthāna 4: Snakes and Invenomation

## Introduction

The fourth chapter of the Kalpasthāna of the *Suśrutasaṃhitā* addresses the topic of snake bites and snake venom. Unusually for the Nepalese version of the *Suśrutasaṃhitā*, 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>409</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>410</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>411</sup> Fayrer provided a biological taxonomy

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

410 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. The classic work of Jolly (1951: ¶93) offered a short but accurate overview of Indian toxicology.

411 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>412</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 428 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>413</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>414</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>415</sup>

412 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).

413 Slouber 2016: 144–145.

414 Harimoto 2011: 101–104.

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

## The Seven Stages of Toxic Shock

A prominent feature the *Suśrutasamhitā*'s interpretation of envenomation symptoms is the concept of seven successive stages or pulses (*vega*) of toxic shock after a bite. This is interestingly coordinated with the *Suśrutasamhitā*'s concept of the *kalās*, which are either seven layers of skin that come into existence during embryonic development or seven interstitial tissues that separate the various parts of the body.<sup>416</sup>

Contemporary clinical studies of snake envenomation and treatment do not show any awareness of such a seven-stage symptomology of traditional Indian medicine.<sup>417</sup> Exceptionally, the studies by Barceloux and Özbek et al., do identify and tabulate three stages of envenomation.<sup>418</sup> The symptoms of these three stages are mainly characterized by increasing degrees of edema. This differs from the *Suśrutasamhitā*'s detailed characterization of changes in skin colour etc.<sup>419</sup>

## Translation

- 1 Now we shall explain the procedure (*kalpa*) that is what should be known concerning the venom in those who have been bitten by snakes.<sup>420</sup>
- 3 Suśruta, grasping his feet, questions the wise Dhanvantari, the expert in all the sciences.

<sup>416</sup> The system of the कला is described at 4.4.4–20 (Su 1938: 355–357). Cf. *Mahākośa*: 1, 183–184, *Śabdasiṃdhau*: 227–228, Kutumbiah 1962: 6, *HIML*: 1, 247–248 and notes. This system of dermal and interstitial कला was not known to the *Carakasamhitā* as such; rather, the *Carakasamhitā* mentioned six kinds of skin (त्वक्) (4.7.4 (Ca 1941: 337)), with different names and characteristics, a contradiction discussed by the commentator Cakrapāṇidatta (*idem*). It appears in later works such as the fourteenth-century *Śārṅgadharaśamhitā* (1.1.60 (P. Śāstrī 1931: 15)).

<sup>417</sup> E.g., Ellenhorn 1997; Weinstein et al. 2009; Pillay 2013: 1747–1749; WHO 2019: 19; Mehta and Sashindran 2002; Hamza et al. 2021; A. M. Deshpande et al. 2022.

<sup>418</sup> Barceloux 2008: 1017, Table 176.3, and Özbek et al. 2021: 7, and Table 1, broadly following Barceloux.

<sup>419</sup> I am grateful to Prof. Jan Gerris (U. Ghent) and Prof. Jan Tytgat (KU Leuven) for assistance in finding relevant toxicological literature.

<sup>420</sup> The *Sarvāṅgasundarī*, commenting on *Aṣṭāṅgahṛdayasamhitā* 1.16.17 (Ah 1939: 246), glossed कल्प as प्रयोग.

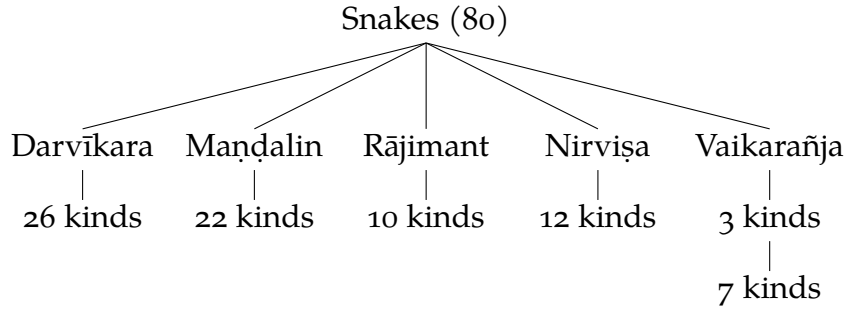


Figure 1: The taxonomy of snakes in the vulgate, 5.4.9–13ab (Su 1938: 571).

- 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 toxic reactions of poisoning”.<sup>421</sup>

### [The Taxonomy of Snakes]

- 5 On hearing his query, that distinguished physician spoke.  
 “The venerable snakes such as Vāsukī and Takṣaka are uncountable.  
 6–9ab “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>422</sup>

9cd–10 “There are eighty kinds of snakes and they are divided in five ways:

<sup>421</sup> The expression “toxic reactions” 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).

<sup>422</sup> 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.

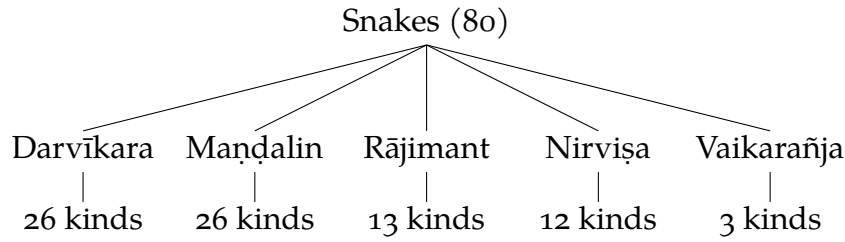


Figure 2: The taxonomy of snakes in the Nepalese version.

Darvikaras, Maṇḍalins, Rājīmats, and Nirviṣas. And Vaikarañjas that are traditionally of three kinds.<sup>423</sup>

- 11 “Of those, there are twenty and six hooded snakes, and the same number of Maṇḍalins are known. There are thirteen Rājīmats.<sup>424</sup>
- 12 “There are said to be twelve Nirviṣas and, according to tradition, three Vaikarañjas.

### [Behaviours]

- 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>425</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>426</sup> accompanied

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 darvikaras?

423 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 *Suśrutasamhitā*.

424 The phrasing of this śloka is awkward.

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

426 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; *Mahākośa*; Apte). Semantic considerations suggest that the word is not related to √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

by a little ring of spots (*cuñcumālaka*),<sup>427</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>428</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>429</sup> gods, holy sages, **spirits**, and saints, or in places full of herbs that destroy poison.<sup>430</sup>

thus mean “twisting up” or “making an arrogant display.”

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.

427 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.

428 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.

429 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*.

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



### [Characteristic Features of Snakes]

- 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>431</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>432</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>433</sup>

431 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)).

432 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.

433 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>434</sup> | ( <i>dadhimukha</i> );                    |
| 5. The White Pigeon                                    | 18. The Lotus Mouth                       |
| ( <i>śvetakapota</i> ); <sup>435</sup>                 | ( <i>punḍarīkamukha</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>śaṃkhapāla</i> );                                 | ( <i>puṣpābhikīrṇnābha</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>ṛjusarpa</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>śīśuka</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>434</sup> Not in vulgate.

<sup>435</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>hastābharanaka</i> );                           |
| 18. The Brown ( <i>babhru</i> );     | 23. The Tatra ( <i>tatra</i> ); <sup>436</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>437</sup> |
| 21. The Pigeon ( <i>pārāvata</i> );  |  |
- 34.3 Here are the Rājīmats.<sup>438</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>439</sup>               |
| ( <i>dvyāṅgulirāji</i> );                   | 10. The Red Eye ( <i>lohitākṣa</i> ); <sup>440</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 ( <i>valāhako</i> ); <sup>441</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>vrkṣaka</i> );    |
| 7. The Year-Snake ( <i>varṣāhika</i> );               |  |

## [Breeding and Gender]

- 34.5 The Vaikarañjas originate out of contrary unions amongst the three colours.<sup>442</sup> Thus:

<sup>436</sup> This seems implausible, but otherwise the list of Maṇḍalins would be short.

<sup>437</sup> 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.

<sup>438</sup> 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*.

<sup>439</sup> Also in the Darvikara list.

<sup>440</sup> Also in the Darvikara list.

<sup>441</sup> Also in the Darvikara list.

varṇa  
means "col-  
our" else-  
where?

1. The Mākuli (*mākuli*);
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>443</sup> Females have small eyes, tongues and heads. Neuters have both characteristics, and are slow to exert themselves or be angry.<sup>444</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>445</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>446</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>447</sup>

442 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 *rājimat* is a group of snakes.

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

444 The reading मन्दचेष्टाक्रोधा is an awkward compound; possibly the original reading was मन्दचेष्टा: + अक्रोधा and sandhi was applied twice.

445 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.

446 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.

447 In the next passage, the symptoms of snake poisoning are indeed explained under

## [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>448</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>449</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>450</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

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three headings.

448 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).

449 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 *Mahākośa*: 1, 429: धूमायन “अङ्गानां धूमोद्धमनमिव” citing the *Suśrutasaṃhitā*.

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

recently-delivered snake is afflicted with abdominal pain and urinates 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>451</sup> Some that are bitten by a blind snake become blind. A constrictor (*ajagara*) is deadly because it swallows, not because of poison.

[toxic reactions]

39 In that context, all snake toxins have seven toxic reactions.<sup>452</sup>

[**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>453</sup> 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.<sup>454</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>455</sup>

In the seventh, it penetrates the semen and greatly irritates the vyāna breath (*vyāna*), and causes the phlegm (*kapha*) to run imperceptibly out

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

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

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

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

455 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 *Mahākośa*: v. 1, 304; Meulenbeld 1974b: 619; Das 2003: 544–545.

of the tubes (*srotas*). That causes the appearance of mucous (*śleṣman*), 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 slurred and there is a cold fever.

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

### [Summary Verses]

40 There are verses on this.

*It is well known that there are seven interstitial layers (kalā) in between the bodily tissues (dhātu). Poison passing through these one by one produces the toxic reaction (vega).<sup>456</sup>*

<sup>456</sup> See note 416 above.

- 41      *The interval taken by the deadly substance (kālakalpa), propelled ( $\sqrt{\text{ūh}}$ ) by air (samīraṇa), to cut the layers of skin is known as the “pulse interval (vegāntara)”.*<sup>457</sup>
- 42      *In the first pulse, an animal has a swollen body, is distressed and broods.*<sup>458</sup>
- In the second, it dribbles somewhat,<sup>459</sup> the hair stands up on its body, and it has pain ( $\sqrt{\text{pīḍ}}$ ) in the heart.*
- 43      *The third stage brings headache and it breaks the ears and necks.*<sup>460</sup>
- 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 reactions.*<sup>461</sup>
- 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 reaction (vega) and that amongst animals like cats and mongooses, poison does not take much effect.*<sup>462</sup>

457 Ḍalhaṇa on 5.4.41 (Su 1938: 574) glossed कालकल्प as मृत्युसदृशं विषं “the poison resembles death.”

458 The verb  $\sqrt{\text{pradhye}}$  “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.

459 The Nepales witnesses use लालि-, not लाला-, for “saliva.”

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

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

462 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 5: 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.<sup>463</sup>

## Translation

- 1 Now we shall explain the procedure (*kalpa*) that is the therapy for someone bitten by a snake.<sup>464</sup>
- 3 For a person bitten on a limb by any snake, one should first of all make a strong binding, at four fingers measure above the bite.<sup>465</sup>

4  
34 <sup>466</sup>

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463 [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.

464 On कल्प, see note 420.

465 Application of a tourniquet is deprecated by modern establishment medicine, which relies on antivenom medications (e.g., Pillay 2013: 150–151 et passim in the literature). The vulgate introduces the word अरिष्टा at this point. This may be a borrowing from Ci.23.251cd ([Ca 1941](#): 582).

466 After this verse, the vulgate text adds twelve verses, 35–46, that do not appear in the Nepalese version.

78 <sup>467</sup>

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<sup>467</sup> After this verse, the vulgate text adds five verses, 79–83, that do not appear in the Nepalese version.

# **Uttaratantra**



# Editions and Abbreviations

Ah 1939

Kuṃṭe, Anṇā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar, Hariśāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमदरुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेदरसायनाह्वया टीकया च समुल्लसितम् = *The Astāṅgahṛidaya* (6th edn., Muṃbayyām: Nirṇayasāgara Press), [ark:/13960/t3tt6967d](https://nirṇayasāgara.org/ark:/13960/t3tt6967d).

Anup

*Anup Sanskrit Library.*

Apte

Apte, Vaman Shivaram (1992), *The Practical Sanskrit-English Dictionary* (Kyoto: Rinsen Book Company), ISBN: 4-653-00038-7; Reprinted from Gode and Karve 1957–59.

*Arthaśāstra*

Kangle, R. P. (1960), *The Kauṭīliya Arthaśāstra* (University of Bombay Studies Sanskrit, Prakrit and Pali, 1; Bombay: University of Bombay), accessed 23/09/2021.

AS

*Asiatic Society.*

As 1980

Āṭhavale, Anaṃta Dāmodara (1980) (ed.), अष्टाङ्गसङ्ग्रहः श्रीमद्वाग्भटविरचितः इन्दुव्याख्यासहितः [= *Vāgbhaṭa's Aṣṭāṅgasāṅgraha with Indu's Commentary*] (Pune:

- M. A. Āṭhavale, Śrīmad Ātreya Prakāśanam), [ark :/ 13960 / s25bwqsd0n7](#).
- Bhela 1921 Mookerjee, Ashutosh, and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), *The Bhela Samhita. Sanskrit Text* (Calcutta: University of Calcutta), [ark :/ 13960 / t3sv3157j](#); Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880:63–4, P. P. S. Sastri 1933:#11085).
- Bhela 2000 Krishnamurthy, K. H. (2000), *Bhela-saṃhitā. Text with English Translation, Commentary and Critical Notes* (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
- BL *British Library*.
- Ca 1941 Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकहृदबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirnaya Sagara Press), [ark:/13960/t48q2f20n](#).
- CDIAL Turner, R. L. (1966–85), *A Comparative Dictionary of the Indo-Aryan Languages* (London, New York, Toronto: Oxford University Press), ISBN: 0197135501, [URL](#); With *Indexes* compiled by Dorothy Rivers Turner (OUP, London, 1969), *Phonetic Analysis* by R. L. and D. R. Turner (OUP, London, 1971), and *Addenda*

- and *Corrigenda* edited by J. C. Wright (School of Oriental and African Studies, London, 1985).
- DED<sub>2</sub> Burrow, Thomas, and Emeneau, Murray B. (1984), *A Dravidian Etymological Dictionary* (2nd edn., Oxford: Clarendon Press), [ark :/13960/t4wj06g26](https://nbn-resolving.org/urn:nbn:de:bsz:55-13960-t4wj06g26), URL.
- EWA Mayrhofer, Manfred (1986–2001), *Etymologisches Wörterbuch des Altindoarischen* (Heidelberg: Carl Winter, Universitätsverlag), ISBN: 3-533-03826-2.
- Garuḍapurāṇa* Pāṇḍeya, Rāmateja (1963) (ed.), *श्रीकृष्णद्वैपायनव्यासप्रणीतं गरुडपुराणम्* (Vidyabhawan Prachya Vidya Granthamala, 3; reprint, Caukhambā Vidyābhavana, Paṇḍita-Pustakālaya: Kāśī), [ark :/13960/t6pz7tg7j](https://nbn-resolving.org/urn:nbn:de:bsz:55-13960-t6pz7tg7j).
- 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/s2kbbk5zcrg9](https://nbn-resolving.org/urn:nbn:de:bsz:55-13960-s2kbbk5zcrg9).
- KEWA Mayrhofer, Manfred (1953–72), *Kurzgefaßtes etymologisches Wörterbuch des Altindoarischen; a Concise Etymological Sanskrit Dictionary* (Heidelberg: Carl Winter, Universitätsverlag).

KL

Kaiser Library.

Mahākośa

Jośī, Veṇīmādhavaśāstrī, and Jośī, Nārāyaṇa Harī (1968), *आयुर्वेदीय महाकोशः अर्थात् आयुर्वेदीय शब्दकोशः संस्कृत-संस्कृत* (Mumbai: Mahārāṣṭra Rājya Sāhitya āṇi Saṃskṛti Maṇḍala), [ark : / 13960 / t22c41g8t](https://nbn-resolving.org/urn:nbn:in-cc0-t22c41g8t).

Mānasollāsa

Shrigondekar, Gajanan K. (1925–61) (ed.), *मानसोल्लासः* = *Mānasollāsa* [or *Abhilaṣitārthacintāmaṇi*] of King Someśvara (Gaekwad's Oriental Series; Baroda: Oriental Institute), [ark : / 13960 / t87h8tn95](https://nbn-resolving.org/urn:nbn:in-cc0-t87h8tn95); v. 2: [ark:/13960/t3gz41v8m](https://nbn-resolving.org/urn:nbn:in-cc0-t3gz41v8m).

MN<sub>1</sub>

Ācārya, Yādavaśarma Trivikrama (1920) (ed.), *महामतिश्रीमाधवकर-प्रणीतं माधवनिदानम् श्रीविजयरक्षित-श्रीकण्ठदत्ताभ्यां विरचितया मधुकोशाख्यव्याख्या, श्रीवाचस्पतिवैद्यविरचितया आतङ्कदर्पणव्याख्याया विशिष्टांशेन च समुल्लसितम्* = *Mādhavanidāna by Mādhavakara with the Two Commentaries, Madhukosha by Vijayarakshita & Shrikanthadatta and Ātankadarpaṇa by Vāchaspati Vaidya* (1st edn., Bombay: Nirnaya Sagara Press), [ark:/13960/t9z08jn5j](https://nbn-resolving.org/urn:nbn:in-cc0-t9z08jn5j).

MN<sub>3</sub>

Ācārya, Yādavaśarma Trivikrama (1932) (ed.), *महामतिश्रीमाधवकर-प्रणीतं माधवनिदानम् श्रीविजयरक्षित-श्रीकण्ठदत्ताभ्यां विरचितया मधुकोशाख्यव्याख्या, श्रीवाचस्पतिवैद्यविरचितया आतङ्कदर्पणव्याख्याया विशिष्टांशेन च समुल्लसितम्* = *Mādhavanidāna by Mādhavakara with the Two Commentaries,*



- Madhukosha* by Vijayarakshita & Shrikanthadatta and Ātānkarpaṇa by Vāchaspati Vaidya (3rd edn., Bombay: Nirnaya Sagara Press), [ark:/13960/t66452x0h](https://nir.nir.org/ark:/13960/t66452x0h); Reprinted Varanasi: Chowkhambha, 1986.
- MW Monier-Williams, Monier, Leumann, E., Cappeller, C., et al. (1899), *A Sanskrit-English Dictionary Etymologically and Philologically Arranged, New Edition* (Oxford: Clarendon Press); 1970 reprint.
- NAK *National Archives of Kathmandu.*
- NCC Raghavan, V., et al. (1949–), *New Catalogus Catalogorum, an Alphabetical Register of Sanskrit and Allied Works and Authors*, 39 vols. (Madras University Sanskrit Series; Madras: University of Madras); v.1: revised edition, 1968. Searchable at <https://vmlt.in/ncc/>.
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# Materia Medica

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<sup>rev</sup>: 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 (*aṁśumatī*) 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*: 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 *Mahākośa*: 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*: 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 (*vijayā*) *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<sub>rev</sub>*: 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 (*tārāvitāra*) Unknown. It is not even certain that these are minerals. The variant reading in the vulgate, *tāraḥ sutāraḥ* was glossed by Ḍalhaṇa on 5.3.14 (*Su* 1938: 568) as follows *tāro 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<sub>rev</sub>](#): 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, *Mahākośa*: 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**<sub>rev</sub>: 113 : 34, 70, 116
- emblic (*āmalaka*) *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**<sub>rev</sub>: 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**<sub>rev.</sub> : 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, *pāliṇḍī*. *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<sub>rev</sub>: 168, Wujastyk 2003a: 97
- jasmine (*mālatī*) *Jasminum grandiflorum*, L. See NK: 1, #1364: 98
- jequirity (*guñjā*) *Abrus precatorius*, L. See AVS: 1, 10, NK: 1, #6, Potter<sub>rev</sub>: 168: 104, 105
- jequirity (*kālakūṭa*) *Abrus precatorius*, L.? Cf. RRS 21.14. See AVS: 1, 10, NK: 1, #6, Potter<sub>rev</sub>: 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 *Tīvārī* 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<sub>rev</sub>: 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 (*meṣaśṛṅga*)  
*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<sub>rev</sub>: 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<sub>rev</sub>: 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 **GJM**1: 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 (*śirīṣamāśaka*) *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' (*sarpaghātī*) 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 (*eroṃṛuka*) 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](#)<sub>rev.</sub>: 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 (*bhāṇḡī*) → *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  
 wild asparagus (*bahuputrā*) → *nandana*?  
*Asparagus racemosus*, Willd. See  
 further wild asparagus (*śatāvarī*): 99  
 wild asparagus (*śatāvarī*) *Asparagus*  
*racemosus*, Willd. See ADPS: 441,  
 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*  
 (L.) Dunal. See AVS: 5, 409 f,  
 Dymock: 2, 566 f., Chevallier 150: 43,  
 71, 77  
 wolfsbane (*vatsanābha*) *Aconitum*  
*napellus*, L. See AVS: 1, 47, NK: 1, #42,  
 Potter<sub>rev</sub>: 4 f. Or *Aconitum*  
*chamanthum* 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  
 woodworm (*ghuṇa*) See note to  
 Atharvaveda 4.16:  
 yellow-berried nightshade (*kṣudrā*)  
*Solanum virginianum*, L. See  
 ADPS: 100, NK: 1, #2329, AVS: 5, 164:  
 115, 116

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*tatra* (the tatra): 133  
 the all black (*sarvakṛṣṇa*): 132  
 the bamboo leaf (*veṇupatraka*): 132  
 the big black (*mahākṛṣṇa*): 132  
 the big cow snout (*vṛddhagonasa*): 132  
 the big head (*mahāśīrṣa*): 132  
 the big jackfruit (*mahāpanasaka*): 132  
 the big pigeon (*mahākapota*): 132  
 the black belly (*kṛṣṇodara*): 132  
 the black snake (*kṛṣṇasarpa*): 132  
 the break hood (*khaṇḍaphaṇa*): 132  
 the brown (*babhru*): 133  
 the brown hut mouth  
 (*babhrūkuṭīmukha*): 132



the chariot of light (*jyotīratha*): 133  
 the conch keeper (*śaṅkhaṭṭhā*): 132  
 the curd mouth (*dadhimukha*): 132  
 the deer foot (*eṇīpada*): 133  
 the drop stripe (*bindurāji*): 133  
 the finger stripe (*aṅgulirāji*): 133  
 the flame (*agnika*): 133  
 the flower all (*puṣpasakalī*): 133  
 the flower sprinkle beauty  
 (*puṣpābhikīrṇābha*): 132  
 the gavedhuka (*gavedhuka*): 132  
 the gift of god (*devadinnā*): 132  
 the goat swallower (*aṇḍagāra*): 133  
 the grass drier (*trṇaśoṣaka*): 133  
 the grass flower (*apūṣpa*): 132  
 the grass flower (*darbhāpuṣpa*): 133  
 the great lotus (*mahāpadma*): 132  
 the great snake (*mahāsarpa*): 132  
 the hand decoration (*hastābharaṇaka*):  
 133  
 the hungry sting (*alagarda*): 132  
 the ilikinī (*ilikinī*): 133  
 the intoxicator (*madanaka*): 132  
 the jackfruit (*panasaka*): 132  
 the khaluṣa (*khaluṣa*): 133  
 the kid (*śīśuka*): 132  
 the kūkuṭa (*kūkuṭa*): 132  
 the little tree (*vrkṣaka*): 133  
 the lotus (*padma*): 132  
 the lotus (*puṇḍarīka*): 133  
 the lotus mouth (*puṇḍarīkamukha*): 132  
 the mark (*citraka*): 133  
 the milk flower (*kṣīrikāpuṣpa*): 133  
 the mirror ring (*ādarśamaṇḍala*): 132  
 the morning glory (*pālindaka*): 132  
 the mountain snake (*girisarpa*): 132  
 the mud (*kardama*): 133  
 the ochre (*kaṣāya*): 133  
 the pale as a flower (*puṣpapāṇḍu*): 132  
 the pigeon (*pārāvata*): 133  
 the pilindaka (*pilindaka*): 132  
 the rain cloud (*valāhako*): 132f  
 the red eye (*lohitākṣa*): 132f  
 the red ring (*raktamaṇḍala*): 132

the ringed (*cakraka*): 133  
 the six part (*ṣaḍaṅga*): 133  
 the snake around (*parisarpa*): 132  
 the speckled (*prṣata*): 132  
 the stimulator (*dīpyaka*): 133  
 the straight snake (*rjusarpa*): 132  
 the stretch (*tantuka*): 132  
 the stripe speckle (*rājicitra*): 133  
 the tatra (*tatra*): 133  
 the two finger stripe (*dvyāṅgulirāji*): 133  
 the two-day (*dvyāhika*): 133  
 the variegated (*vicitra*): 132  
 the white jaw (*svetahanu*): 133  
 the white leaf (*śukapatra*): 133  
 the white pigeon (*śvetakapota*): 132  
 the white ring (*śvetamaṇḍala*): 132  
 the white rip (*śvetadara*): 132  
 the worm eater (*kikkisāda*): 133  
 the year-snake (*varṣāhika*): 133  
 thei snake flag (*ahipatāka*): 133  
 torn (*darita*): 129f  
 toxic reaction (*vega*): 128, 138  
 toxic reaction (*viśavega*): 136  
 toxic reaction (*vega*): 137  
 trṇaśoṣaka (the grass drier): 133  
 trunk of the body (*koṣṭha*): 136  
 tubes (*srotas*): 137  
 tvac (skin): 127

*vāksamūhārthavistāra* (extensive meaning  
 of the collection of statements): 134  
*valāhako* (the rain cloud): 132f  
*varṣāhika* (the year-snake): 133  
*vega* (toxic reaction): 128, 137f  
*vegāntara* (pulse interval): 138  
*venupatraka* (the bamboo leaf): 132  
*vicitra* (the variegated): 132  
*viparītadarśana* (metamorphopsia): 135  
*viśavega* (toxic reaction): 136  
*vrddhagonasa* (the big cow snout): 132  
*vrkṣaka* (the little tree): 133  
*vyāna* (vyāna breath): 136  
*vyāna* breath (*vyāna*): 136  
 without venom (*nirviṣa*): 129



## Todo list

|  |    |
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| ■ 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. . . . .   | 62 |
| ■ 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 |

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| ■ Bear's bile instead of deer's bile. . . . .  | 98  |
| ■ punarṇṇavā in the N & K MSS . . . . .  | 99  |
| ■ śrita for śṛta . . . . .   | 99  |
| ■ explain more . . . . .   | 99  |
| ■ 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? . . . . . | 129 |
| ■ grammar . . . . .  | 130 |
| ■ ri- ṛ-? . . . . .  | 132 |
| ■ varṇa means "colour" elsewhere? . . . . .  | 133 |
| ■ 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 |

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| ■ (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<br>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<br>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<br>ghṛtābhyaṅgo 'navasthāsu?, svedā lepaḥ ghṛtābhyaṅgonavas-<br>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 |

