of the New Edition of the Suśrutasamhitā

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#### **Abstract**

The Suśruta Project is producing a new Sanskrit text edition of the Su-śrutasaṃhitā based on the early Nepalese manuscripts. As we gradually transcribe and edit the manuscripts, we are producing this new translation of the classic work.

 $<sup>\,</sup>$  1  $\,$  MS Kathmandu KL 699, MS Kathmandu NAK 1-1079, and MS Kathmandu NAK 5-333.

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# Kalpasthāna, adhyāya 2

#### Introduction

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

In spite of having made the greatest effort, it has been impossible to identify these plants. In the Himalayan regions, Kirātas and Śabaras are able to identify them.<sup>100</sup>

Dalhaṇa also recorded variant readings of these poison names from the manuscripts that he consulted of the lost commentary of Gayadāsa (fl. c. ce 1000). The identities of these poisons have been in doubt for at least a thousand years. <sup>101</sup> Identifications have in many cases been equally impossible for us today.

One path for exploration in this situation is to attempt to reverseengineer some identifications by considering the known toxic plants of India.<sup>102</sup>

#### **Translation**

1 And now I shall explain what should be known about stationary poisons. 103

<sup>100</sup> After *Suśrutasaṃhitā, kalpasthāna* 2.5 (Su 1938: 564). From the view of Sanskrit authors, Kirāṭas and Śabaras were tribal peoples. The eleventh-century author Bhikṣu Govinda, however, cast his treatise as a dialogue with a Kirāṭa king called Madana who was a master of the alchemical art (HIML: IIA, 620).

<sup>101</sup> See Wujastyk 2003: 80–81.

<sup>102</sup> Valuable reference sources on Indian plant toxicology in general include Pillay 2013: chs. 10, 11 and Barceloux 2008: parts 1.II, 3 and 4.

<sup>103</sup> No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021). "Stationary" here is a term contrasted with "moving," and signifies plants as opposed to animals and insects.

- It is said that there are two kinds of poisons, stationary (*sthāvara*) and mobile (*jaṅgama*). The former dwells in ten sites, the latter in sixteen places.
- 4 Traditionally, the ten are: root, leaf, fruit, flower, bark, milky sap  $(k \cdot \bar{s} ira)$ , pith  $(s \bar{a} ra)$ , resin  $(n ir y \bar{a} sa)$ , the elements  $(d h \bar{a} tu)$ , and the tuber.
- 5 In that context,
  - the eight root-poisons are:
    - 1. liquorice (klītaka)<sup>i</sup>,<sup>104</sup>
    - 2. sweet-scented oleander (aśvamāraka)<sup>ii</sup>, <sup>105</sup>
    - 3. jequirity  $(gu\tilde{n}j\bar{a})^{iii}$ , <sup>106</sup>
    - 4. aconite (subhangurā)iv, 107
    - 5. *karaṭā*, <sup>108</sup> and ending with
    - 6. leadwort (vidyutśikhā  $\rightarrow$  agni- or rakta-śikhā?) $^{\rm v}$ ,  $^{\rm 109}$
    - 7. 'endless' (ananta)vi, and
    - 8. *vijayā*,<sup>110</sup>

104 Liquorice eaten in excess can be poisonous.

- 105 The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (Pillay and Sasidharan 2019).
- 106 Jequirity does indeed contain a dangerous toxin called Abrin in its seeds and to a lesser extent in its leaves, but apparently not in its roots or bulb. Abrin is not harmful if eaten, but an infusion of the bruised (not boiled) seeds injected or rubbed in the eyes can be fatal (NK:#6). The dose can be quite small.
- 107 The plant is usually called just bhangurā without the prefix su-"good."
- This poisonous root cannot at present be identified. Similar-sounding candidates include <code>karkaṭaka</code>, <code>karaghāṭa</code> (emetic nut), and <code>karahāṭa</code>, but since this is a prose passage, there would be no reason to alter the word to fit a metre. Monier-Williams et al. (MW: 255) cite an unknown lexical source that equates <code>karaṭa</code> (mn.) with safflower (<code>Carthamus tinctorius</code>, L.), but this plant does not have a poisonous root.
- 109 The roots of both rose and white leadwort are very toxic.
- 110 Meulenbeld (1989: 61, n. 3) argued that our text read a masculine or neuter noun *vijaya*, which never signifies cannabis. However, unlike the vulgate, the unanimous readings of the Nepalese manuscripts give feminine *vijayā*. Nevertheless, even this form only started to signify *Cannabis sativa* L. after the end of the first millennium (Meulenbeld 1989; Wujastyk 2002; McHugh 2021). The *Sauśrutanighanṭu*
- i Glycyrrhiza glabra, L.; see AVS 3.84, NK #1136
- ii Nerium oleander, L.; see ADPS 223, NK #1709
- iii Abrus precatorius, L.; see AVS 1.10, NK #6, Potter 168
- iv  $\rightarrow$  bhangura = ativiṣā? Aconitum ferox, Wall. ex Ser.; see NK #38
- v Plumbago zeylanica (or rosea?), L.; see NK #1966, 1967
- vi ?; see ?

Expected
(Pillay
2010):
Croton
tiglium,
L. = Naepala, Jayapala, kanakaphala,
titteriphala
(INL #720);
Calotropis
spp.;
Citrullus
colocynthus (colocynth);
Ricinus
communis
(castor);

Note about Gayī's edition.

- the leaf-poisons include:
  - 'poison-leaf' (viṣapatrikā)<sup>vii</sup>,
  - 'drum-giver' (lambaradā) viii,
  - thorn apple (*karambha*)<sup>ix</sup>, and
  - 'big thorn apple' (mahākarambha)<sup>x</sup>;
- the fruits of items like: jequirity  $(gu\tilde{n}j\bar{a})^{xi}$ ,  $r\bar{u}$ ṣkara  $()^{xii}$ , viṣa  $()^{xiii}$ , and  $vedik\bar{a} ()^{xiv}$ , are
  - kumudavati (kumadavati)<sup>xv</sup>,
  - reņuka (?)xvi,
  - kurūkaka (?)xvii,
  - 'little bamboo' (venuka)xviii, 111,
  - thorn apple (karambha)<sup>xix</sup>,
  - 'big thorn apple' (mahākarambha)xx,
  - 'pleaser' (nandanā)<sup>xxi</sup>,

gives a number of synonyms for  $vijay\bar{a}$ , almost none of which have any poisonous parts (Suvedī and Tīvārī 2000: 5.77, 10.143). But one of them,  $viṣ\bar{a}n\bar{\iota}$  (also  $meṣaśṛng\bar{\iota}$ ), is sometimes equated with  $Dolichandrone\ falcata\ (DC.)\ Seemann\ (Sivarajan and Balachandran 1994: 518), a plant used as an abortifacient and fish poison (Nadkarni 1982<math>a$ : #862). This identification is tenuous.

#### 111 Not poisonous.

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vii unknown; see?
viii unknown; see?
ix Datura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
   Datura metel, L.?; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
xi ; see
xii; see
xiii; see
xiv; see
xv unknown; see?
xvi ?; see Piper aurantiacum Wall. (NK: #1924) is not poisonous.
xvii?; see?
xviiiBambusa bambos, Druce?; see NK #307
xix Datura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
xx Datura metel, L.?; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
xxi?; see?
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- 'crow'  $(k\bar{a}ka)^{xxii}$ ,
- the flower-poisons include those of:
  - rattan (*vetra*) xxiii,
  - wild chinchona (kādamba)<sup>xxiv</sup>,
  - black pepper  $(vall\bar{\imath}ja \rightarrow marica)^{xxv}$ ,
  - thorn apple (*karambha*)<sup>xxvi</sup>, and
  - big thorn apple (*mahākarambha*)<sup>xxvii</sup>;
- the seven bark, pith  $(s\bar{a}ra)$  and resin  $(niry\bar{a}sa)$  poisons are:
  - 'gutboiler' (antrapācaka) xxviii,
  - 'blade' (kartarīya)<sup>xxix</sup>,
  - wild mustard (saurīyaka)\*\*\*,
  - emetic nut  $(karagh\bar{a}ța \rightarrow karah\bar{a}ța? \rightarrow madana)^{xxxi}$ ,
  - thorn apple (karambha)\*\*xxii,
  - wild asparagus (nandana  $\rightarrow$  bahuputrā?) xxxiii, and
  - munj grass (*nārācaka*)<sup>xxxiv</sup>;<sup>112</sup>
- the three milky sap  $(k \bar{s} \bar{t} r a)$ -poisons are:

xxxiSaccharum bengalense, Retz.?; see NK #2184

• purple calotropis ( $kumudaghn\bar{i} \rightarrow arka?$ ) $^{xxxv}$ , $^{113}$ 

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xxii?; see?
xxiiiCalamus rotang, L.; see AVS 1.330, NK #413
xxivAnthocephalus cadamba, Miq.; see NK #204
xxv Piper nigrum, L.?; see NK #1929; Rā.6.115, Dha.4.85, Dha.2.88
xxviDatura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
xxviDatura metel, L.?; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
xxviiinknown; see?
xxixunknown; see?
xxx Cleome viscosa, L.? (cf. Rā.4.144); see AVS 2.116, NK #615
xxxiRandia dumetorum, Lamk.; see NK #2091
xxxiDatura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f.,
   ADPS 132.
xxxiAsparagus racemosus, Willd.; see ADPS 441, AVS 1.218, NK #264, IGP 103, IMP
   4.2499ff., Dymock 482ff.
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xxxvCalotropis gigantea, (L.) R. Br.; see ADPS 52, AVS 1.341, NK #427, Potter 63

<sup>112</sup> The bark of wild asparagus (*Asparagus racemosus*, Willd.) is toxic.

<sup>113</sup> The name of this poison, *kumuda-ghnī*, means 'lotus killer'. In Sanskrit literature, the *kumuda* lotus is associated with the moon, since it blossoms by night. Since the sun

- oleander spurge (*snuhī*)<sup>xxxvi</sup>, and
- 'web-milk' (jālakṣīri)<sup>xxxvii</sup>;
- the two element  $(dh\bar{a}tu)$ -poisons are:
  - 'foam-stone' (phenāśma) xxxviii, and
  - orpiment (haritāla) xxxix; 114
- the thirteen tuber-poisons are:
  - jequirity (*kālakūṭa*)<sup>xl</sup>,<sup>115</sup>
  - wolfsbane (vatsanābha)\*li,
  - Indian mustard (sarṣapa)xlii,
  - leadwort  $(p\bar{a}laka \rightarrow citraka)^{\times liii}$
  - 'muddy' (kardama) xliv, the
  - 'Virāṭa's plant' (vairāṭaka)xlv,
  - nutgrass (mustaka)<sup>xlvi</sup>,

causes this lotus to close, it is therefore an 'enemy' of the lotus. One of the chief words for the sun, *arka*, is also the name of *Calotropis gigantea*, which indeed has a milky juice which is a violent purgative, poison and abortifacient.

- 114 Dutt (1922: 38–42) conjectured that 'foam-stone' may be impure white arsenic obtained by roasting orpiment.
- The much later (perhaps sixteenth century) alchemical *Rasaratnasamuccaya* of pseudo-Vāgbhaṭa (21.14) says that the *kālakūṭa* poison, here translated as 'jequirity', is similar to '*kākacañcu*' or 'Crow's Beak', which is indeed a name for the plant jequirity or *Abrus precatorius*, L., more commonly called *guñjā* (not to be confused with *gañjā*). The black seed-pod is described as having a 'sharp deflexed beak' in botanical descriptions, so the Sanskrit name is quite graphic and appropriate. The poisonous scarlet seeds of *A. precatorius* can have a distinct black dot or tip, which could perhaps be translated '*kāla-kūṭa*', or 'Black Tip'.

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

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xxxviiuphorbia neriifolia, L., or E. antiquorum, L.; see ADPS 448, AVS (2.388), 3.1, NK #988, IGP 457b
xxxviinknown; see ?
xxxviiiknown; see ?
xxxiiArsenii trisulphidum; see NK v. 2, p. 20 ff.
xl Abrus precatorius, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.
xli Aconitum napellus, L.; see AVS 1.47, NK #42, Potter 4 f.
xlii Brassica juncea, Czern. & Coss.; see AVS 1.301, NK #378
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xliii Plumbago zeylanica (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967 xliv unknown; see?

xlv unknown; see?

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

- atis root (śṛṅgīviṣa) xlvii,
- sacred lotus (prapuṇḍarīka) xlviii,
- radish (mūlaka)<sup>xlix</sup>,
- 'alas, alas' (hālāhala)¹,
- 'big poison' (mahāviṣa)li, and
- galls (karkaṭa) lii. 116

Thus, there are fifty-five stationary poisons.

6 There are believed to be four kinds of wolfsbane, two kinds of *mustaka*, and six kinds of Indian *sarṣapa*. But the rest are said to be unique types.

## The effects of poisons

7–10 People should know that root-poisons cause writhing (udvestana), ranting ( $pral\bar{a}pa$ ), and delirium (moha), and leaf-poisons cause yawning, writhing, and wheezing ( $\dot{s}v\bar{a}sa$ ).

Fruit-poisons cause swelling of the scrotum, a burning feeling and writhing. Flower-poisons will cause vomiting, distension ( $\bar{a}dhm\bar{a}na$ ) and sleep ( $sv\bar{a}pa$ ).

The consumption of poisons from bark, pith  $(s\bar{a}ra)$  and resin  $(niry\bar{a}sa)$  will cause foul breath, hoarseness  $(p\bar{a}rusya)$ , a headache, and a discharge of phlegm (kapha).<sup>117</sup>

117 At 1.2.6 (Su 1938: 11), Dalhaṇa glosses hoarseness (pāruṣya) as vāgrūkṣatā, "a rough, dry voice."

<sup>116</sup> Leadwort root is a powerful poison. Nutgrass is tuberous, but non-toxic. Atis has highly toxic tuberous roots. Neither sacred lotus nor galls are toxic. The 'alas, alas' poison (hālāhala) is the mythical poison produced from the churning of the ocean at the time of creation: it occurs in medical texts such as the present one, and commentators identify it with one or other of the lethal poisons such as wolfsbane or jequirity. Agrawala (1963: 126) makes the intriguing suggestion that the word hālāhala, possibly to be identified with Pāṇini's hailihila (P.6.2.38), may be of Semitic origin, although his evidence seems uncertain (Steingass (1930: 1506a) cites Persian halāhil 'deadly (poison)' as a loan from Sanskrit). Mayrhofer 1953—72: iii.585 also cites a claim for an Austro-Asiatic origin for the word.

xlviiAconitum heterophyllum, Wall. ex Royle; see AVS 1.42, NK #39

xlviiNelumbo nucifera, Gaertn.; see Dutt 110, NK #1698

xlix Raphanus sativus, L.; see NK #2098

<sup>1</sup> unknown; see Cf. Sodhalanighantu p.43 (sub bola) = stomaka = vatsanābha

li unknown; see?

lii Rhus succedanea, L.; see NK #2136

The milky sap  $(k \circ \bar{t} ra)$ -poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy. The element  $(dh \bar{t} tu)$ -poisons give one a crushing pain in the chest, make one faint and cause a burning feeling on the palate.

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

#### 11-17 Symptoms of tuber poisoning

The tuber-poisons, though, are severe. I shall talk about them in detail. With jequirity  $(k\bar{a}lak\bar{u}ta)^{liii}$ , there is numbness and very severe trembling. With wolfsbane  $(vatsan\bar{a}bha)^{liv}$ , there is rigidity of the neck, and the faeces, and urine become yellow.

With sārṣapa  $(s\bar{a}rṣapa)$ ,<sup>119</sup> the wind becomes defective  $(v\bar{a}tavaigunya)$ , there is constipation  $(\bar{a}n\bar{a}ha)$ , and lumps (granthi) start to appear. With leadwort  $(p\bar{a}laka \rightarrow citraka)^{lv}$ , there is weakness in the neck, and speech gets jumbled.<sup>120</sup>

With the one called 'muddy'  $(kardama)^{lvi}$ , there is a discharge (praseka), the faeces pour out, and the eyes turn yellow. The 'Virāṭa's plant'  $(vairāṭaka)^{lvii}$  causes pain in the body and illness in the head. Paralysis of one's arms and legs and trembling are said to be caused by mustaka  $(mustaka)^{.121}$ 

15b With great aconite (*mahāviṣa*) one's limbs grow weak, there is a burning feeling and swelling of the belly. 122

-> ativișa

Look up

- 16a With puṇḍarīka (puṇḍarīka), one's eyes go red, and one's belly becomes distended. 123
- 16b With mūlaka ( $m\bar{u}$ laka), one's body is drained of colour and the limbs are paralysed. 124
- 17a With hālāhala (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps. 125
- 17b With atis root (śṛṅgīviṣa) lviii, one gets violent knots (granthi) and
  - 118 At 6.54.10 (Su 1938: 773), Dalhaṇa glosses loose stool (*viḍbheda*) as *dravapurīṣatā*, "having liquid stool."
  - 119 *Sārṣapa* would normally mean "connected with mustard," and excessive consumption of mustard oil can be harmful. However, the *Sauśrutanighaṇṭu* (156) gives *rakṣoghnā* as a synonym for *sarṣapā*. This can be *Semecarpus anacardium*, L.f., which has some poisonous parts.
  - 120 The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.
  - 121 The substitution in MS NAK 5-333 affecting 15cd is caused by an eye-skip to the word *viṣeṇa* in 2.17. *Mustaka* commonly refers to Cyperus rotundus, L.; the root is used in āyurveda but is not poisonous. However other dictionaries list *mustaka* amongst serious poisons, for example *Rājanighaṇṭu* (22 v. 42) and *Rasaratnasamuccaya* 16, v. 80. However, its ancient identity is still doubtful.
  - 122 The poisonous root great poison (*mahāviṣa*) is not clearly identifiable, although *viṣa* is commonly aconite. Verse 6 above notes that there are several kinds of aconite.
  - 123 The word puṇḍarīka very commonly means sacred lotus, Nelumbo nucifera, Gaertn. The entire plant is edible and cannot be the poison intended here. Singh and Chunekar (1972: 252) noted that this poison is unidentified and that it is also listed as a poison in Carakasaṇhitāci.23.12.
  - The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. Singh and Chunekar (1972: 317) noted that this poison is unidentified.
  - 125 Identification of *hālāhala* is uncertain. It may simply be a mythical poison, or its specific identity may have been lost over the centuries. Late *nighaṇṭu*s identify it as *stomaka* = *vatsanābha*, i.e., *Aconitum napellus*, L. (*Soḍhalanighantu* p.43). Dalhaṇa on 5.2.17 (Su 1938: 564) interprets our "gasps" as "the man laughs and grinds his teeth." But this gloss is probably displaced and intended to apply to verse 2.18.

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

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

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

lvi unknown; see?

lvii unknown; see?

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

- stabbing pains in the heart. 126
- 18a With markaṭa (*monkey*), one leaps up, laughs, and bites.<sup>127</sup>
- 18b-19a Experts said that the thirteen cited highly potent tuber-poisons should be known to have possessed ten features:
- 19b-20a dry  $(r\bar{u}k sa)$ , hot, sharp, rarified  $(s\bar{u}k sa)$ , fast-acting, pervasive, expansive  $(vik\bar{a}sin)$ , limpid (visada), light, and indigestible are the ten.
  - Because of their dryness they cause inflammation of the wind; their heat inflames the choler and blood. Because of their sharpness they unhinge the mind, and they cut through the connections with the sensitive points (*marman*). Because of being rarified they infiltrate and disconnect the parts of the body. Because they are fast-acting they kill quickly, and because of their pervasiveness they blend with one's physical constitution (*prakṛti*). Because they expand they destroy the humour (*doṣa*)s, element (*dhātu*)s, and the impurities. Because they are limpid they overflow, because they are light they are difficult to cure, and because they are indigestible they are hard to eliminate. And so they cause long suffering.
    - One can be certain that any poison which is instantly lethal, whether it be stationary, mobile, or artificial, will have all ten of these features.

## Slow-acting poison

- A poison, whether it be stationary, mobile, or artificial, which has not completely gone from the body, but which is worn out or damaged by anti-toxic medicine, or else dried up by blazing fire, wind, or sunshine, or which has just lost its virulence by itself, becomes a 'slow-acting poison  $(d\bar{u}s\bar{v}isa)$ '. Because it has lost its potency it is no longer lethal. It is surrounded by phlegm (kapha) and has an aftermath that lasts for years.
- If he is suffering from this, his stools and complexion deteriorate, he gets bad breath and a nasty taste in his mouth, and is very thirsty. He faints, vomits, his speech is slurred, and he is depressed. Also, he has the symptoms of contaminated dropsy (*duṣyodara*).<sup>128</sup>

<sup>126</sup> Singh and Chunekar (1972: 407) noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

<sup>127</sup> Singh and Chunekar (1972: 299) said of *markaṭa*, "an unidentified vegetable poison." Cf. Suvedī and Tīvārī 2000: v.36 for synonyms that lead to the non-toxic jujube tree.

<sup>128 &#</sup>x27;Contaminated dropsy' (dusyodara or dūsyudara) is described elsewhere as a condition

- 28 If it lodges in his stomach (āmāśaya), his wind and phlegm become diseased; if it lodges in his intestines (pakvāśaya), his wind and choler become diseased. The man's hair and body are ruined, and he looks like a bird whose wings have been chopped off.
- 29a-c If it lodges in one of the body tissue (*dhātu*)s such as the chyle (*rasa*), it causes the diseases that were described as arising from the elements, and it rapidly becomes inflamed on nasty days which are cold and windy.
- Now listen to the preliminary signs of such a case: sleepiness, heaviness, yawning, slackness (viśleṣa) and exhilaration (harṣa), and a chafing of the limbs (aṅgamarda). Next, it causes food-mania (annamada) and indigestion, appetite-loss (arocaka), round blotches (maṇḍala), skin disease (koṭha), and delirium (moha). The body tissues dwindle away (kṣaya), the feet, hands, and face get swollen, dropsy develops, and there is vomiting and diarrhoea. Perhaps his colour may drain away and he may faint or have irregular fever (viṣamajvara). It may cause heightened, powerful thirst.
  - These various disorders are of many different types: one poison may produce madness, while another one may cause constipation  $(\bar{a}n\bar{a}ha)$ , and yet another may deplete the semen. One may cause slurred speech, while another pallid skin disease (kustha).
  - Traditionally, 'slow-acting poison'  $(d\bar{u}s\bar{\iota}-visa)$  is so called because it corrupts  $(d\bar{u}sayate)$  the body tissue  $(dh\bar{a}tu)s$ . This corruption is caused by repetitively keeping to certain locations, times, foods, and sleeping in the daytime.

#### 34- The stages of slow poisoning

In the first shock of having taken a stationary poison, a person goes a brown colour, his tongue becomes stiff, he grows faint, and starts to gasp.

- In the second, he trembles, collapses, has a burning feeling, as well as a sore throat. When the poison reaches the stomach  $(\bar{a}m\bar{a}\acute{s}aya)$ , it causes pain in the chest (hrd).
- 36 In the third, the roof of his mouth goes dry, he gets violent shooting

which arises when women of ill-character mix nail clippings, hair, urine, faeces, or menstrual blood with a man's food, in order to gain power over him (2.7.11–13).

- pains  $(\hat{sula})$  in the stomach  $(\bar{a}m\bar{a}\hat{s}aya)$ , and his eyes swell up and go a nasty, yellow colour.
- In the fourth shock, it causes the stomach and intestines to sting (*toda*), he gets hiccups, a cough, a rumbling in the gut (*antra*), and his head becomes very heavy.
- 38 In the fifth he dribbles phlegm (*kapha*), is drained of colour, his joints crack (*parvabheda*), all his humours are inflamed, and he also has a pain in his belly (*pakvādhāna*).
- 39a In the sixth, his consciousness is annihilated and he completely loses control of his bowels.
- 39b In the seventh, his shoulders, back and loins break, and he is finished.

#### Remedies for the stages of slow poisoning

- 40 In the first shock of the poison, he should vomit and be sprinkled with cold water. Then he should be made to drink an antidote (agada) together with honey and ghee.
- In the second, he should vomit as before, and then be given a purgative to drink.
- In the third, it is good for him to drink an antidote and take a nasal medicine (*nasya*) as well as an eye salve (*añjana*).
- 42a In the fourth, he should drink a medical antidote mixed with oil.
- In the fifth, he should be prescribed the antidote together with a decoction ( $kv\bar{a}tha$ ) of honey and liquorice (madhuka)<sup>lix</sup>.
  - In the sixth, the cure is the same as for diarrhoea. And in the seventh, he should have medicated powder blown up his nose, and after having a 'crow's foot ( $k\bar{a}kapada$ )' cut made on his head, he should have a piece of bloody meat put on it.<sup>129</sup>
  - In the intervals between each shock, assuming that the above actions

<sup>129</sup> Suśruta explains the term <code>avapīḍa</code> 'medicated nasal powder' as the procedure either of administering nasal drops (<code>avapīḍa</code>), or blowing medicated powder into the nose (4.40.44–46): it is particularly recommended for unconscious or incapable patients. The 'crow's-foot' procedure is also recommended later in the 'Section on Procedures' (5.5.24a) in cases of snake-bite. It is also described by Caraka (see p. ?? below).

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

have been performed, one should give the patient cold porridge together with ghee and honey, to take away the poison.

Both kinds of poison are destroyed by a porridge prepared with the stewed juice  $(niṣkv\bar{a}tha)$  of the following: luffa  $(koṣ\bar{a}takya)^{lx}$ , migraine tree  $(agnimantha)^{lxi}$ , velvet-leaf  $(p\bar{a}th\bar{a})^{lxii}$ , 'sun-creeper'  $(s\bar{u}ryavall\bar{\iota} \to j\bar{\iota}vant\bar{\iota}?)^{lxiii}$ , heart-leaved moonseed  $(amrt\bar{a})^{lxiv}$ , myrobalan  $(abhay\bar{a})^{lxv}$ s, siris  $(sir\bar{\iota}ṣa)^{lxv}$ , white siris  $(kinih\bar{\iota})^{lxvii}$ , selu plum  $(selu)^{lxviii}$ , white clitoria  $(giry\bar{a}hv\bar{a})^{lxi}$ , the two kinds of turmeric  $(ra-jan\bar{\iota})^{lxx}$ , the two hogweed  $(punarnav\bar{a})^{lxxi}$ s (red and white), black cardamom  $(harenu)^{lxxii}$ , the three pungent spices (trikatu) (dried ginger  $(sunth\bar{\iota})^{lxxiii}$ , long pepper  $(pippal\bar{\iota})^{lxxiv}$ , and black pepper  $(mar-ica)^{lxxv}$ ), the two Indian sarsaparillas  $(s\bar{a}rive)$  (country sarsaparilla  $(anant\bar{a})^{lxvii}$  and black creeper  $(p\bar{a}lind\bar{\iota})^{lxvii}$ ) and country mallow  $(bal\bar{a})^{lxxviii}$ .

lx Luffa cylindrica, (L.) M. J. Roem. or L. acutangula, (L.) Roxb.; see ADPS 252, NK #1514 etc.

lxi Premna corymbosa, Rottl.; see IMP 1927, ADPS 21, NK #2025, AVS 4.348; GJM 523: = P. integrifolia/serratifolia, L.

lxii Cissampelos pariera, L.; see ADPS 366, NK #592, GJM 573, IMP 1.95; cf. AVS 2.277

lxiii Holostemma ada-kodien, Schultes; see ADPS 195, AVS 3.167, NK #1242, IMP 3.1619

lxiv Tinospora cordifolia, (Willd.) Hook.f. & Thoms.?; see ADPS 38, NK #2472 & 624, Dastur #229

lxv Terminalia chebula, Retz.; see ADPS 172, NK #2451, Potter 214

lxvi Albizia lebbeck, Benth.; see AVS 1.81, NK #91

lxviiAlbizia procera, (Roxb.) Benth.; see GVDB 98, NK #93

lxvi**£**Cordia myxa, L. non Forssk.; see GJM 529 (2), IGP 291b, cf. IMP 3.1677f; cf. AVS 2.180 (C. dichotoma, Forst.f.), NK #672 (C. latifolia, Roxb.)

lxix Clitoria ternatea, L.; see AVS 2.129, NK #621

lxx Curcuma longa, L.; see ADPS 169, AVS 2.259, NK #750

lxxi Boerhaavia diffusa, L.; see ADPS 387, AVS 1.281, NK #363

lxxiiAmomum subulatum, Roxb.?; see PVS Caraka 2.734, AVS 1.128, NK #154

lxxiiZingiber officinale, Roscoe.; see ADPS 50, NK #2658, AVS 5.435, IGP 1232

lxxivPiper longum, L.; see ADPS 374, NK #1928

lxxvPiper nigrum, L.; see ADPS 294, NK #1929

lxxvHemidesmus indicus, (L.) R. Br.; see ADPS 434, AVS 3.141-5, NK #1210

lxxv**li**chnocarpus frutescens, (L.) R.Br. or Cryptolepis buchanani, Roemer & Schultes; see AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434

lxxvSiiida cordifolia, L.; see ADPS 71, NK #2297

## 47-49 The 'invincible' ghee

There is a famous ghee called 'Invincible' (ajeya). It rapidly destroys all poisons and 'always conquers'. It is made with a mash (kalka) of the following plants: liquorice  $(madhuka)^{lxxix}$ , Indian rosebay  $(tagara)^{lxxx}$ , costus  $(kuṣṭha)^{lxxxi}$ , deodar  $(bhadrad\bar{a}ru)^{lxxxii}$ , black cardamom  $(hareṇu)^{lxxxiii}$ , Alexandrian laurel  $(punn\bar{a}ga)^{lxxxii}$ , cherry  $(elav\bar{a}luka)^{lxxxv}$ , cobra's saffron  $(n\bar{a}gapuṣpa)^{lxxxii}$ , water-lily  $(utpala)^{lxxxvii}$ , white clitoria  $(sit\bar{a} \to \acute{s}vet\bar{a}?)^{lxxxviii}$ , embelia  $(vi\rlap/danga)^{lxxxix}$ , sandalwood  $(candana)^{xc}$ , cassia cinnamon  $(patra)^{xci}$ , 'going-to-my-darling'  $(priyangu)^{xcii}$ , rosha grass  $(dhy\bar{a}maka)^{xciii}$ , the two turmerics (ordinary turmeric  $(rajan\bar{\imath})^{xciv}$  and Indian barberry  $(d\bar{a}ruharidr\bar{a})^{xcv}$ ), the two Indian nightshade  $(b\rlap/rhat\bar{\imath})$ s (poison berry  $(b\rlap/rhat\bar{\imath})^{xcvi}$  and yellow-berried nightshade  $(k\rlap/sudr\bar{a})^{xcvii}$ ), the two Indian sarsaparillas  $(s\bar{a}rive)$  (country sarsaparilla  $(anant\bar{a})^{xcviii}$  and black creeper  $(p\bar{a}lind\bar{\imath})^{xcix}$ ), beggarweed  $(sthir\bar{a} \to \acute{s}\bar{a}laparn\bar{\imath})^{c}$ , and 'spotted-leaf'  $(sah\bar{a})^{xci}$ 

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lxxixGlycyrrhiza glabra, L.; see AVS 3.84, NK #1136
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lxxxTabernaemontana divaricata (L.) R.Br. ex Roem. & Schultes.; see GJM 557, AVS 5.232 lxxx\$aussurea costus, Clarke; see NK #2239

lxxxGedrus deodara, (Roxb.ex D.Don) G. Don; see AVS 41, NK #516

lxxxiAimomum subulatum, Roxb.?; see PVS Caraka 2.734, AVS 1.128, NK #154

lxxxGalophyllum inophyllum, L.; see AVS 1.338, NK #425

lxxxPrunus cerasus, L.?; see BVDB 58, NK #2037

lxxxMesua ferrea, L.; see NK #1595

lxxx**Ni**ymphaea stellata, Willd.; see GJM 528, IGP 790; Dutt 110, NK #1726

lxxx**Cliit**oria ternatea, L.; see AVS 2.129, NK #621

lxxxEmbelia ribes, Burm. f.; see ADPS 507, AVS 2.368, NK #929, Potter 113

xc Santalum album, L.; see ADPS 111, NK #2217

xci Cinnamomum tamala, (Buch.-Ham.) Nees; see AVS 2.84, NK #

xcii Callicarpa macrophylla, Vahl.; see AVS 1.334, NK #420

xciiiCymbopogon martinii (Roxb.) Wats; see AVS 2.285, NK #177

xcivCurcuma longa, L.; see ADPS 169, AVS 2.259, NK #750

xcv Berberis aristata, DC.; see Dymock 1.65, NK #685, GJM 562, IGP 141

xcviSolanum violaceum, Ortega; see ADPS 100, NK #2329, AVS 5.151

xcviSolanum virginianum, L.; see ADPS 100, NK #2329, AVS 5.164

xcvil·lemidesmus indicus, (L.) R. Br.; see ADPS 434, AVS 3.141-5, NK #1210

xcixIchnocarpus frutescens, (L.) R.Br. or Cryptolepis buchanani, Roemer & Schultes; see AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434

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

## 50-52 Curing the 'slow-acting' poison

Someone suffering from 'slow-acting (dūsīvisa)' poison should be well sweated, and purged both top and bot-Then he should in all cases be made to drink the following antidote which removes 'slow-acting poison':

Take long pepper  $(pippal\bar{\iota})^{cii}$ , rosha grass  $(dhy\bar{a}maka)^{ciii}$ , spikenard  $(m\bar{a}ms\bar{\iota})^{civ}$ , lodh tree  $(s\bar{a}vara \rightarrow lodhra)^{cv}$ , nutgrass  $(paripelava \rightarrow plava \rightarrow must\bar{a}?)^{cvi}$ , soda crystals  $(suvarcik\bar{a} \rightarrow suvarjik\bar{a})^{cvii}$ , cardamom  $(s\bar{u}ksmail\bar{a})^{cviii}$ , 'scented pavonia'  $(toya \rightarrow b\bar{a}laka)^{cix}$ , and 'gold-chalk' ochre (kanakagairika). This antitoxin, taken with honey, eliminates 'slow-acting poison'. It is called 'slow-acting poison antidote  $(d\bar{u}s\bar{i}vis\bar{a}ri)$ ', and there is no situation where it is not recommended.

- feeling, hiccups, constipation (ānāha), depletion of the semen, distension, diarrhoea, fainting, illness in the heart, bellyache (jaṭhara), madness, trembling, or others, then one should treat each one in its own terms, as well as using the anti-toxic medicines.
  - 'Slow-acting poison' is curable  $(s\bar{a}dhya)$  if caught immediately; it is treatable  $(y\bar{a}pya)$  if it is of a year's standing; but it cannot be cured in someone who has unhealthy habits or who is weak  $(ks\bar{i}na)$ .

ci Uraria lagopoides, DC; see GJM 577, Dymock 1.426, IMP 1.750ff., NK #2542; ADPS 382, AVS 2.319 4.366 are confusing

cii Piper longum, L.; see ADPS 374, NK #1928

ciii Cymbopogon martinii (Roxb.) Wats; see AVS 2.285, NK #177

civ Nardostachys grandiflora, DC.; see NK #1691

cv Symplocos racemosa, Roxb.; see ADPS 279, NK #2420

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

cvii Sodium carbonate; see NK 2, p. 101

cviiiElettaria cardamomum, Maton; see AVS 2.360, NK #924, Potter 66

cix Pavonia odorata, Willd.; see ADPS 498, NK #1822

Thus ends the second chapter, called 'on the knowledge of stationary poisons', in the Procedures Section of Suśruta's *Compendium*.

#### **Abbreviations**

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# Glossary

'gold-chalk' ochre	- indian	element
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Aconite	- hṛd: 43	expansive
- hālāhala: 41		-vikāśin: 42
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- distension: 39	- rasa: 43	- añjana: <b>44</b>
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- antidote: 44	-ānāha: 40, 43, 47	food-mania
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	dūṣīviṣa	indian sarsaparillas
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- pakvādhāna: 44	poison: 47	intestines
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Mention this in the introduction as an example of the scribe know-	
 ing the vulgate	28
fn about sadyas+	28
Bear's bile instead of deer's bile	29
punarṇṇavā in the N & K MSS	30
śrita for śrta	30
explain more	31
Medical difference from Sharma.	31
example where the vulgate clarifies that these should be used sep-	
arately; appears to be a gloss inserted into the vulgate text	31
The two uses of prāpta are hard to translate. prāptā $h \rightarrow k$ sipram is	
an example of the vulgate banalizing the Sanskrit text to make	
sense of a difficult passage	32
$\sqrt{\text{vyadh not }\sqrt{\text{vedh (also elsewhere and for the ears)}}$ , causative	
optative	32
opposite of the vulgate Same as As 1.8.89 (As 1980: 79)	32
Medical difference	32
Expected (Pillay 2010):	
Croton tiglium, L. = Naepala, Jayapala, kanakaphala, tit-	
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Citrullus colocynthus (colocynth);	
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find ref	39
Check out these refs	40
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