

A Translation of the New Edition of the
Suśrutasamhitā

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Sūtrasthāna, adhyāya 13: On Leeches

Literature

Previous scholarship

Meulenbeld offered an annotated overview of this chapter and a bibliography of studies on Indian leeches and their application.⁴⁸

A Persian version of this chapter of the *Suśrutasamhitā* was included in *Sikandar Shāh's Mine of Medicine* (*Ma'dīn al-shifā' i Sikandar-Shāhī*) composed in 1512 by Miyān Bhūwah b. Khawāṣṣ Khān.⁴⁹

More recently, Brooks has explored the sense of touch in relation to leeching and patient-physician interactions.⁵⁰

Translation

- 1 And now we shall explain the chapter about leeches.
- 3 The leech is for the benefit of kings, rich people, delicate people, children, the elderly, fearful people and women. It is said to be the most gentle means for letting blood.
- 4 In that context, one should let blood that is corrupted by wind, bile or phlegm with a horn, a leech, or a gourd, respectively. Or, each kind can be made to flow by any of them in their particular way.⁵¹
- 5x And there are the following about this:

48 HIML: IA, 209; IB, 324, n. 131.

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

50 Brooks 2020a,b,c.

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

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

- 1.13.5 The horn of cows is praised for being unctuous, **smooth**, and very sweet. Therefore, when wind is troubled, that is good for bloodletting.⁵²
- 1.13.5a Having a length of seven fingers and a large body the shape of a half moon, should first be placed into a cut. A strong person should suck with the mouth.⁵³
- 6 A leech lives in the cold, is sweet and is born in the water. So when someone is afflicted by bile, they are suitable for bloodletting.⁵⁴
- 7 A **gourd** is well known for being pungent, dry and sharp. So when someone is afflicted by phlegm it is suitable for bloodletting.
- 8 In that context, at the scarified location one should let blood using a horn wrapped in a covering of a thin bladder, or with a **gourd** with a flame inside it because of the suction.⁵⁵
- 9 Leeches are called “*jala-ayu-ka*” because water (*jala*) is their life (*āyur*).⁵⁶ “Home” (*okas*) means “dwelling;” their home is water, so they are called “water-dwellers (*jalaaukas*).”
- 10 There are twelve of them: six are venomous and just the same number are non-venomous.
- 11 Here is an explanation of the venomous ones, together with the therapy:
- Black (*kṛṣṇā*)
 - Mottled (*karburā*)
 - Sting-gush (*alagarddā*)⁵⁷

52 The vulgate replaced “smooth” with “hot.”

53 This passage is not found in the vulgate, but it is similar to the passage cited by Ḍalhaṇa at 1.13.8 (Su 1938: 56) and attributed to Bhāluki. Bhāluki was the author of a *Bhālukitantra* that may have predated Jejṇa and might even have been one of the sources for the *Suśrutasaṃhitā* (HIML: IA, 689–690 *et passim*). The editor Ācārya was aware of this reading in the Nepalese manuscripts; see his note 4 on 1.13.5 (Su 1938: 55, note 4).

54 Note that the particular qualities (*guṇas*) of the leech in this and the following verses counteract the quality of the affliction. See Brooks 2018: 113, table 1.

55 There are questions about the wrapping or covering of the horn. Other versions of the text, and the commentator, propose that there may be two coverings, or that cloth may be a constituent. Comparison with contemporary horn-bloodletting practice by traditional Sudanese healers suggests that a covering over the top hole in the horn is desirable when sucking, to prevent the patient’s blood entering the mouth (PBS 2020). Our understanding of this verse is that the bladder material is used to cover the mouthpiece and then to block it, in order to preserve suction in the horn for a few minutes while the blood is let.

56 This is a folk etymology.

57 Treating गर्दा as गल्दा and translating as in RV 8.1.20, with Jamison and Brereton

- Rainbow (*indrāyudhā*)
- Oceanic (*sāmudrikā*)
- Cow-praising (*govandanā*)⁵⁸

Amongst these,

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

When someone is bitten by them, the symptoms are: a swelling at the site of the bite, excessive itching and fainting, fever, a temperature, and vomiting. In that context the Great Antidote (*mahāgada*) should be applied in drinks and liniments (*ālepana*), etc.⁵⁹ A bite by the Rainbow leech is not treatable. These venomous ones have been explained together with their remedies.

12 Now the ones without venom.⁶⁰

- Tawny (*kapilā*)
- Ruddy (*piṅgalā*)
- Dart-mouth (*śaṅkumukhī*)
- Mouse (*mūṣikā*)
- Lotus-mouth (*puṇḍarīkamukhī*)
- Sāvarikā (*sāvarikā*)

Amongst these,

(2014: 1023, verse 20 and cf. commentary). But if गर्द is to be taken from $\sqrt{\text{गर्द}}$ then we might have “crying from the sting.”

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

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

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

- The one called Tawny has sides that look as if they are dyed with realgar and is the colour of glossy mung beans on the back.⁶¹
- The one called Ruddy is a bit red, has a round body, is yellowish, and moves fast.
- The one called Dart-mouth is the colour of liver, drinks fast and has a long mouth.
- The one called Mouse is the colour and shape of a mouse and has an undesirable smell.
- The one called Lotus is the colour of mung beans and has a mouth that looks like a lotus.
- The one called Sāvarikā has the colour of a lotus leaf and is eighteen centimetres long. But that one is used when the purpose is an animal.

The non-venomous ones have been explained.

13 Their lands are Yavana, Pāṇḍya, Sahya, Potana and so on.⁶² Those in

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

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

Some scholars have identified the name with modern Bodhan in Telangana (Sircar 1971: 189; Schwartzberg, Bajpai, et al. 1978: E6, p. 14, 140 *et passim*; Sen 1988: 102), but this implausible identification is traceable to a speculative suggestion by Raychaudhuri (1953: 89, n. 5, 143) based on a variant form “Podana” found in some early manuscripts of the *Mahābhārata*: “This name reminds one of Bodhan in the Nizam’s dominions,” “possibly to be identified with Bodhan.”

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

- particular have large bodies and are strong, they drink rapidly, consume a lot, and are without venom.
- 14 In that context, the venomous leeches are those originating in decomposing venomous insects, frogs, urine, feces and in polluted water.⁶³ The , non-venomous ones originate in decomposing *sacred lotus, blue water-lily, white water-lily, fragrant lotus, pondweed* and in pure waters.
- 15 There is a verse on this:
- These ones move about in sweet-smelling habitats that are abundant with water. Traditionally, they do not behave in a confused manner or lie in the mud.*⁶⁴
- 16 They can be caught with a fresh hide or after being caught in other ways.⁶⁵
- 17 Then these should be put into a large new pot furnished with mud and the water from lakes or wells. One should provide what they need to eat. One should grind up *pondweed, dried meat*, and aquatic tubers, and one should give them grass and aquatic leaves to lie on, and every three days water and food. Every week, one should transfer them into a different pot.
- 18 And on this:

*One should not **nurture** those that are thick in the middle, that are*

other criteria.

- 63 The vulgate on 4.13.14 (Su 1938: 57) includes fish in this list.
- 64 Ḍalhaṇa on 1.13.14 (Su 1938: 57) discussed why the leeches would not “behave in a confused manner” (सङ्कीर्णचारिन्), saying that they do not “eat a diet that is unwholesome because of poison etc.” (विषादिविरुद्धाहारभुजः). The use of विरुद्ध is odd here, but cf. Ḍalhaṇa’s suggestion at 4.23.4 (Su 1938: 485) that विरुद्ध refers to the chapter on wholesome and unwholesome foods (हिताहिताध्याय, 1.20 (Su 1938: 94–99)).
- 65 “Fresh hide” (आर्द्रचर्मन्) may suggest that the animal skin still includes meat or blood that is attractive to a leech.
- The Nepalese witnesses all read गृहीत्वा “having (been) caught” for the vulgate’s गृहीयात् “one may grasp (by other means).” This is hard to construe clearly.
- Ḍalhaṇa on 1.13.15 (Su 1938: 57) quoted “another treatise” (तन्त्रान्तरवचनात्) that said that autumn is the time to collect leeches. He also explained that “other methods” of collecting leeches included smearing a leg or other limb with cream, butter or milk, etc., or using a piece of flesh from a freshly killed animal.

*injured,⁶⁶ or **thin**, those that are not born in the proper habitat, those that will not attach, that drink little or those that are venomous.*

- 19 First of all, get the patient who has an ailment that is treatable by leech-bloodletting to sit or lie down. Then, dry **any diseased opening** with powders of earth and cow-dung. Then make them free from impurities, with their bodies smeared with **Indian mustard** and **turmeric** and moving about in the middle of a cup of water. After all this, the physician should make them attach to the site of the ailment. Now, for those that are not attaching, he should provide a drop of milk or a drop of blood. Alternatively, one should make some śastrapada (*marks with a knife*).⁶⁷ And if it still will not attach, make other ones attach.
- 20 He can know that it is attached when it fixes on, hunching its neck and making a mouth like a horse's hoof. Then, he should cover it with a wet cloth and keep it there.
- 21 Now, if the physician knows, from the arising of pricking and itching at the bite, that clean blood is being taken, he should take it off. Then, if it does not release because of the scent of blood one should sprinkle its mouth with powdered **rock salt**.
- 22 Then he should coat it with **rice-grain chaff**, rub its mouth with sesame oil and salt and cause it to vomit by holding its tail in his left hand and very slowly rubbing it with the thumb and finger of his right hand in the proper direction, as far as the mouth, until it is properly purged.⁶⁸ A properly purged leech placed in a goblet of water moves about, wanting to eat. If it sinks down, not moving, it is badly purged; one should make it vomit once again.

A badly purged leech develops an incurable disease called Indrapada.⁶⁹ **One that protects its deflated head with its body, suddenly curls up and makes the water warm is traditionally said to have Indrapada.**

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

67 On पद as a “mark,” “imprint,” or “place of application,” cf. 4.1.29 (Su 1938: 399), 5.4.15 (Su 1938: 571), etc. See footnote 287.

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

69 The Nepalese witnesses read इन्द्रपद/इन्द्रापद, but the vulgate reads इन्द्रमद, a term that is found in other texts such as the *Mānasollāsa* 6.641 (vol. 1, 87), where it is a fever affecting fish, and the *Garuḍapurāṇa* 1.147.3 (tr. A Board of Scholars 1957: 2, 425) where it is fever affecting clouds; see further Brooks [forthcoming](#).

- Thus, one should keep such a one as before.⁷⁰
- 23 After observing the proper or improper flow of the blood, one should rub the opening made by the leech with honey.⁷¹ Alternatively, one may bind it up and smear it with ointments that are astringent, sweet, oily and cold.
- 24 And about this there is the following:
- When the leeches have just drunk, one should pour ghee on it. And one should pour on to the blood things that are capable of stopping the blood.*
- 25 *Someone who knows habitats, the capture, feeding and bloodletting of leeches is worthy to treat a king.*

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

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

