

# Snake Venom

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## **The Drug Picture**

The drug picture of Lachesis produced by Constantine Hering includes a number of clearly defined symptoms. Patients in need of Lachesis feel uneasy and cannot bear tight-fitting bands such as collars, belts or brassieres. It is not uncommon for them to feel that there is excess pressure inside. Discharges which may be said to relieve that pressure will therefore ameliorate. A headache will improve with the onset of menses, for example. Another characteristic is the left-sidedness of symptoms, so that a left-sided migraine is more likely to respond to Lachesis than a right-sided one. This is also the reason why Lachesis addresses the heart, just as more right-sided drugs tend to address the liver.

Aggravation from sleep is an important Lachesis keynote. Patients go to bed in a condition that is bearable and wake up with dreadful palpitations, headache, and paresthesia of the arms. 'Sleeps into the aggravation' is thus indicative of the drug. Concerning the psychology, 'loquacity' is a common sign. An exaggerated desire to communicate denotes a certain lack of stability. Reticence on the other hand is a virtue which physicians in particular are well-advised to cultivate.

All symptoms are worse from heat; the sun, the heat of the sun, a hot room — none of these are tolerated. At the same time Lachesis is an antipyretic and has often proved life-saving in serious septic conditions (as reported in case histories from the pre-antibiotic era).

What do the following five symptoms represent?

- constriction
- left-sidedness
- worse from sleep
- loquacity
- worse from heat

They form a specific constellation of symptoms that points the way to a cure. If we have to depend entirely on the homeopathic approach, which is empirical, all we can do is to learn them by heart, for there is no obvious connection between them. Yet snakes have their own specific nature in the world outside. How do they fit into that world?

A physician needs two ears — one to listen to the patient's story, the other to listen to what the medicinal agents provided by great nature have to tell. Let us therefore go out and look at snakes.

## **The Sub-Order of Snakes**

Snakes, lizards, turtles and crocodiles all belong to the class of Reptilia. They are poikilothermic (i.e. have variable body temperatures) like the amphibians, but the

embryo is surrounded by an amnion, and as in the birds, the eggs are laid on land and no longer depend on a watery environment; instead they have a calcareous shell. The mammals take interiorization one step further, and the nest which birds build in the outside world is taken inside and becomes the uterus. Birds and reptiles both produce egg shells therefore, and the famous fossil known as the Archeopteryx is an intermediate form between reptiles and birds. The animal had a long lizard-like tail, it had teeth and the hand had free fingers. Those were reptilian features. On the other hand, it had real feathers and proper wings made up of primaries and secondaries, and those are features belonging to birds. This is also why birds and reptiles are classified together as the Sauropsida.

Despite the relationship, birds seem the opposite of snakes in many respects. The snakes are out-and-out reptiles. The four limbs have disappeared and they are legless; they progress on the ground and in trees with sinuous twisting movements, burrow in the sand, and sometimes swim in water. Birds, on the other hand, take the limb principle to extremes, with the anterior limbs developed into wings to produce the airfoils that permit them to fly. Migrating birds circle the whole globe, covering thousands of kilometers year after year. Snakes like to stay in one place, occupying the same familiar territory for years on end. Essentially, therefore, snakes have narrowed their habitat to a fixed point on earth; they have narrowed down their bodies so that they have become a limbless tube. In plant terms we might say that snakes have concentrated on the stem principle. Birds on the other hand represent the leaf principle with their wings; they have expanded into the world around them and indeed made the whole earth their habitat. These animals also address our sense of music. Bird song is something unique in the world of nature. Just as the rose or the lily is the culmination of plant life and comes close to being a work of art, nature presents the art of music in the song of birds. Some birds are even able to imitate human speech. Snakes are deaf, having no middle ear. (Snake charmers achieve their ends not through music but because of the movements they make.) These animals therefore lack the mobile part of the ear (malleus, incus and stapes in mammals) and the four limbs, i.e. the outer and the inner mobility that is part of musicality. Music becomes dance in the movement of the limbs. This is probably also the reason why the sinuous twisting movements of snakes look so unpleasant to us; they lack both music and harmony. The flight of birds on the other hand is something sublime; a certain awe is felt as the eye follows the strange V-shaped form of a flight of cranes in the sky. The beat of the wings forms a wave as it passes further back the line and in this one experience the common breath that guides individual birds the way a conductor does a symphony. Taking snakes and birds together, it would seem that the snakes forewent music entirely in their organization so that the birds might have it. Surely the price we pay for the admiration we feel for birds is the repugnance we might experience when we look at a snake.

Among the Sauropsida, birds have anticipated development in so far as they are already homeothermic like mammals. Once again they are slightly overdoing things, however, for they do not attain to the 'proper level' of 37° C. Compared to human beings they may be said to have a fever all the time, their body temperature being in the range of 41-44° C, depending on the species. Snakes, on the other hand, have remained poikilothermic. Birds accordingly have a completely separate left and right heart, while snakes have an incomplete septum.

All in all, snakes show regression of limbs, narrowing down to a tubelike body that is all trunk, limitation to a restricted habitat, and exclusion from the whole world of sound — which also represents a narrowing down if one compares them to birds.

### **Similarity Between the Picture Presented in Nature and the Drug Picture**

Snakes are evidence of nature's power to narrow down the expansiveness that is characteristic of birds. Lachesis patients become like this when they feel constricted, when symptoms are ameliorated from discharges that relieve the constriction. This may be seen as a first link between the powers of nature that have produced snakes in the outside world, and the medicinal powers that snake venom develop within human beings.

The elongated body form of snakes is responsible for one-sidedness also in other respects. Snakes that still have rudiments of a shoulder and a pelvic girdle — thus indicating their relationship to four-footed animals — have both a right and a left lung. Higher snakes have not even the rudiments of limbs and no left lung. In humans, the left lung has two lobes while the right lung has three, i.e. the left lung shows a degree of regression. Compared to humans, the extreme to be seen in snakes is that the heart is entirely limited to the left side of the body and the lung to the right. The actual situation is that the two organs extend lengthways in front, beside and behind one another, but compared to the human anatomy the aforesaid may nevertheless be said to be true. It immediately explains the left-sidedness that is a prominent feature in the drug picture of Lachesis and the connection with the heart.

Birds conquer all dimensions of space in their flight; snakes have to move horizontally on the ground because they have no legs. No other animal shows the horizontal direction of the animal backbone as clearly as a snake does. Human beings on the other hand have assumed the vertical position, though this applies only when they are in daytime consciousness. In sleep, humans, too, must assume the horizontal position of the animal backbone. In sleep, humans are in the same position as snakes. Hence the characteristic symptom 'worse from sleep', 'sleeps into the aggravation'.

### **Snake Venom**

So far we have limited ourselves to the things snakes have had to give up compared to other animals: their legs, ears, and the left lung. Nature only economizes in order to gain savings, and every loss also represents a gain. What do snakes gain from all those regressions? Mainly venom production. Snake venoms are highly complex proteins. They are produced in oral and parotid salivary glands and injected into the victim through poison fangs. The method of application is important, for taken by the oral route snake venoms are nontoxic, being digested just like other proteins. Mineral poisons (arsenic, for instance) are toxic if taken by the oral route, as are plant poisons, though the latter are chemically more complex (atropine and digitoxin, for example). Animal poisons are usually highly complex proteins, and generally speaking, their chemical structure is not yet fully known — which merely serves to indicate their complex nature. Wasps, bees and scorpions inject their venom. The sting is carried on the abdomen. Spiders carry their poison apparatus in the mouth region. These insects are worlds away from humans in terms of any relationship. Snakes, being vertebrates, are the venom producers closest to humans. Toads have their venom in the skin, snakes carry it in the mouth.

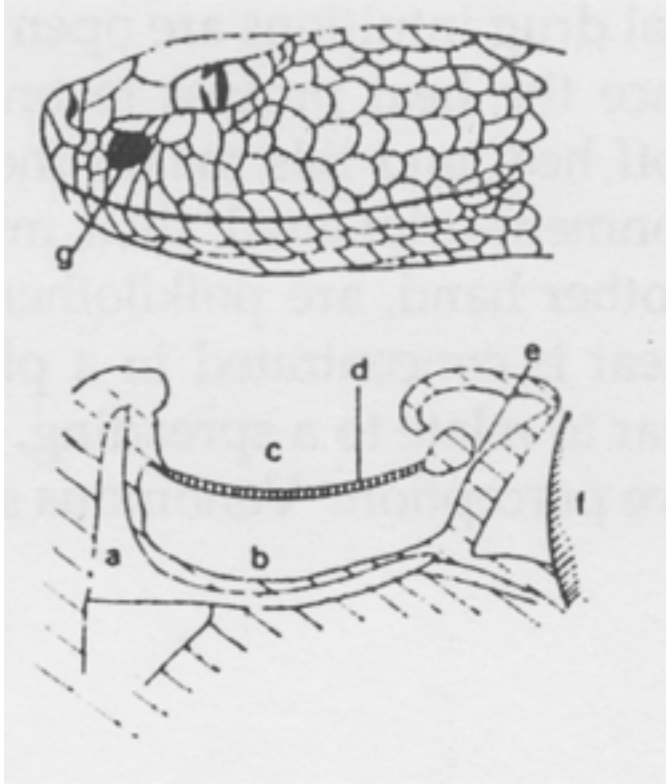
The poison apparatus reaches maximum perfection in the most highly developed snakes, among them *Lachesis muta*. The poison fang does not merely have a groove, as in the lower venomous snakes, but is like a hypodermic needle, so that the venom is really injected. All the other teeth in the upper jaw have become rudimentary, leaving only the poison fang and its replacements. This can be raised and made to stand forward. Initially the snake merely injects its victim with the venom. It then pursues the animal until it collapses, and swallows it whole, without biting or chewing. The poisoning process is one of predigestion: animals that have not been previously injected with venom take much longer to digest. The poison fang thus also takes on the function that normally consists in chewing. The skeleton of a snake's head is highly mobile, and this applies particularly to the bones of the mouth. This mobility reaches its maximum in venomous snakes where the upper jaw carrying the poison fang can be tilted forward by an angle of 90°. Thus we see what snakes have gained in losing their limbs: the teeth have become highly mobile organs of motion in two respects, firstly in outer mobility and secondly through the poison fang becoming the efferent duct of a gland.

Let us return to comparison with birds. Something quite different comes to expression in a dry beak opened in song than in venomous saliva ejected through a tooth. These are serious matters, yet there is a certain humour to the way they present in the drug picture. The keynote 'loquacity', the exaggerated desire to communicate shown by *Lachesis* patients, needs to be seen in this context, for the snake carries its venom in the mouth. We may also connect the symptom of excessive loquacity with the improvement from discharges that has already been mentioned. A *Lachesis* patient's migraine may improve with the onset of menses, and the same patient relieves the excess pressure in her soul through the ceaseless flow of talk. When a snake discharges venom this, too, is like using a safety valve for the many restrictions and economies that these animals have taken upon them.

### **The Pit as a Sense Organ for Heat**

Snakes have an extraordinarily acute sense of smell which they use to detect and pursue their prey. Pit vipers, and *Lachesis* is one of these, have an additional organ, the 'pit'. This is a hollow space between nose and eye that is covered with a thin, slightly depressed, membrane.

The membrane is only 1/100 mm in thickness but has a rich supply of much-branched free nerve endings (1000/mm<sup>2</sup>) deriving from the fifth cranial nerve. The pits enable the snake to perceive the heat radiated by its prey. Temperature differences as small as 0.003° C will cause nerve stimulation, and a pit viper is able to perceive the heat radiating from the palm of a human hand at a distance of half a meter. The most highly developed venomous snakes have thus created a sense organ for heat that even experts in zoology admit has no equal in the animal kingdom. The structure has some similarity to the primitive cup-like eyes of some lower animals, but an even better comparison is with the ear drum and tympanic cavity. There, too, a sensitive membrane is stretched over a cavity or pit. The middle ear that is lacking in all other snakes has re-emerged as an organ for the perception of heat in the pit vipers. These snakes therefore show the great sensitivity to heat that also appears in the drug picture of *Lachesis*: 'worse from heat' — 'does not tolerate heat in any form' — 'climacteric hot flushes'.



Head of pit viper showing the pit (g).

*Cross section through the pit of a pit viper: a) maxilla, b) inner chamber, c) outer chamber, d) membrane, e) canal and sphincter, f) eye.*

### **From Drug Picture to Drug Intuition**

The five cardinal symptoms we have been discussing show a striking similarity to the special physiological features of snakes. Up to this point, therefore, our approach has consisted in explaining the drug picture on the basis of what presents in nature. Those symptoms — constriction, leftsidedness, worse from sleep, loquacity, worse from heat — are pathological in humans but physiological in snakes. 'Every animal, if we consider it in the right way, is a disease. In the animal the disease may be said to be normal.' (R. Steiner, *Curative Education*, GA 317, Lecture of 7 July 1924). So far we have considered human pathology in connection with the snake. We do not have to stop at this, however. Birds, the opposite of snakes, also represent a particular pathological process in that their physiological temperature is 41-44° C. Snakes are in opposition to this 'bird pathology' and thus become medicinal in this respect. At this point, therapeutic action is no longer motivated by empirical observation but by thought, and that is 'drug intuition'. It is evident that homeopathic drug pictures as well as anthroposophical drug intuitions are open to rational elucidation.

Birds enhance the heat process to one of continuous fever: they are always giving off heat and this makes them homeothermic, like humans. Birds are environment-orientated; their migrations circle the whole globe. Snakes, on the other hand, are poikilothermic and have a limited habitat; their sense of heat is concentrated in a pit between nose and eye. Birds essentially appear to relate to a spreading, actively

produced heat principle involving passive perception. Venomous snakes thus represent the essence of a natural power that contracts the heat principle, localizing it in a single organ. As physicians we utilize this natural power when we give Lachesis in the treatment of febrile diseases. Patients who have a fever enter into bird nature, as it were, and this has to be countered with the essential nature of venomous snakes, so that the human being can freely find his own level somewhere between the excessive heat production of birds and excessive passive heat perception of snakes.

### **The Upright Serpent**

When a patient's fever is healed with snake venom, a balance is established between feverish bird nature and poisonous snake nature; this balance could not be achieved unless there was disease, or in other words the human being. The snake which in nature progresses horizontally is able to heal the human being with its venom; it thus attains to the upright position in the human being. Or else we may say that the medicinal action helps the human being from his horizontal sick bed to the vertical position. Such a view gives a new understanding of ancient symbols. Moses set up a brazen serpent in the desert, and anyone who looked on that serpent did not die of the bite of the fiery serpents (*Numbers 21,8*). Since then, however, evolution has progressed, as is also evident in this particular case. When human beings fall ill they assume the characteristics of a process in outer nature. A successful healing process, on the other hand, means that a certain natural process (e.g. snake venom) assumes human characteristics. Every process in nature therefore reveals a gesture full of healing intent for man. We see signs here of a macrocosmic human being who is poured out in nature and holds all healing principles within him. This is the world's redeemer who said to Nicodemus: 'And as Moses lifted up the serpent in the wilderness, even so must the Son of man be lifted up: That whosoever believeth in him should not perish, but have eternal life.' (*John 3. 14-15*). In Moses' day, the upright serpent was a brazen one and the fiery serpents could kill. Since the turning-point of time the upright serpent has itself become a symbol of healing that will tame the fire and can show us the way from the pathological symptoms in human beings to the healing principles in nature.

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### **LITERATURE**

Boie D., *Die Schlange - eine Heilmittelstudie*, BEH 1966, Heft 6.

Grzimek's *Tierleben*, Vol. 6, "Kriechtiere." Zurich 1971.

Hering C., "Description of an inadvertent proving of Lachesis venom." In Clarke's *Dictionary of Materia Medica*, p. 211.

Poppelbaum H., *Tierwesenskunde*, Dornach, 1982.

Portmann A., *Einfuehrung in die vergleichende Morphologic der Wirbeltiere*, Basle, 1959.

Steiner R., *Foundations of Esotericism*, GA 93a, lecture of September 26, 1905. *Man as Symphony of the Creative Word*, GA 230, lecture of October 28, 1923. *Cosmic Workings in Earth and Man*, GA 352, lecture of January 14, 1924.

Voegeli A., *Leit-und wahlanzeigende Symptome der Homoeopathie*, Heidelberg, 1984.