Gerhard HANEVELD (Baarn, Netherlands)

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# THE SCYTHIAN LAMB

To stop the bleeding of a wound the surgeons of the past could rely on a variety of hemostypics. These included Greek and Roman remedies — gall apples (Antyllos), ashes of horse dung and powdered eggshells (Pliny) — proven folk-medicines — spider webs, puff balls, agaric (fungi), sponges, peat and moss, powdered mummy, hairs of hares (Lanfranc), pulverized bovists — and even more curious styptics like brain moss, fungi from the skull. Cotton wool was also used (4, 6, 9, 19).

In the year 1837 the Amsterdam physician, Doctor Jan Adriaan Kool (1794-1880) received a sample of a peculiar indonesian herb, which had, according to the aborigines, extremely hemostyptic properties. The name of this herb was, penghawar djambi (8, 13, 21).

After painstaking research Doctor Kool found an exact depiction of his herb in the illustrated *Herbarium of Elisabeth Blackwell* in the edition of 1760 (3).

The description runs as follows : « This is a light-brown coloured moss growing on the roots of a fern tree. It is considered to be very effective in all kinds of haemorrhages and other fluxes. It staunches bleeding wounds. » According to the *Herbarium* the plant was known under a variety of names : The Scythian Lamb, l'Agneau scythique, Agnus Scythicus Boramez, Frutex tartaricus, Planta animal.

For a long time the Scythian Lamb was looked upon as a legendary kind of « vegetable animal » (20, 21). One of the first descriptions was provided by the English philosopher and statesman Francis Bacon (1561-1626) in his *Sylva Sylvarum* or *A natural History* (London) published after his death in 1627 (1).

He says :

« There is a fabulous narration that in the northern countries there should be an herb that groweth in the likeness of a lamb, and feedeth upon the grass, in such sort as it will bare the grass round about. »

According to the italian mathematician and physician Geronimo Gardano (1501-1576) the name of the herb is Borametz. Borametz is the old russian name for lamb. Modern Baran means sheep, baranek is the diminutive (21). The prefix Scythian, however, is wrong because the plant is not a native inhabitant in regions north of the Black Sea.

According to Bacon, as well as to his predecessors Scaliger (1484-1558) and the french soldier poet Guillaume de Saluste du Bartas (1544-1590) (18), the Scythian Lambs were real, though peculiar animals. They look like lambs, « save that for foote, within the ground they fixe a living roote ».

The Swiss professor in anatomy and botany Caspar Bauhin (1550-1624) also described the Scythian Lamb and mentioned its hemostyptic qualities (2). A picture of the plant is found, partially hidden, on the title page of John Parkinson's (1567-1650) *Paradisi in Sole Paradisus terrestris* (1629). One perceives that the little lamb is attached to the ground.

Both Bacon, Scaliger and Bauhin supported the idea that this animal arose from a melon seed. Hence they also called it Frutex tartaricus or fructus animus, animal fruit.

Engelbert Kaempfer (1651-1716) the famous german traveller and physician who visited Japan and wrote an extensive report on the Japanese way of life, gave a whole discourse on the linguistic aspects of the curious Scythian Lamb. He came however to the conclusion that what is called a vegetable animal is in fact the skin of an unborn lamb cut from its mother's womb (10). All these far fetched ideas are not so amazing if one sees the remarkable Scythian Lamb in reality.

The first European who had the opportunity to examine the Scythian Lamb in its habitat was the portuguese explorer Joannis de Loureiro (15). In the description in his *Flora cochinchinensis* (1790) he explicitly stated that the Scythian Lamb was not animal, although it resembled the skin of an newborn lamb, but that it was golden mossy hair sprouting from the root of a tropical fern. De Loureiro also mentioned its medical properties as an adstringent and haemostyptic which was also supposed to be effective in the treatment of gonorrhea.

When the Amsterdam Dr. Kool, received his specimen of the Scythian Lamb, he started a series of investigations.

First he made a microscopical examination of the hairs and tried to make watery and alcoholic extractions, but without results.

This was followed up by experiments on the hemostyptic properties. First he examined the effect of bleeding caused by leeches. When the leeches were removed, a compress of hairs of the Pengawar djambi was applied on the bleeding wound. Within a few minutes the bleeding was stopped ; there were no unpleasant sensations or signs of irritation. Even deep wounds responded well as Dr. Kool experienced with a six-year-old, healthy horse. A neckvein was opened and about six ounces of blood freely flowed away ; then a compress of hair of the scythian lamb was laid on the wound and slightly pressed down with the fingers. After three minutes the bleeding stopped.

Dr. Kool also tested the Scythian Lamb, in a 28 years old unmarried female who had suffered from prolonged menstrual fluxes — up to two or three weeks — for over two years. First Doctor Kool ordered her to take a table spoonful of Penghawar djambi extract every hour for two days. This didn't help much. When he made a more concentrated extraction, however, speedy recovery took place. The intense fluxes did not recur.

After the publication of his results in a small booklet *Investigation on the Penghawar djambi* (1834) (11), the fern hairs were imported from the Dutch East Indies by the Dutch Trading Company. In 1856 Agnus Scyticus or Penghawar djambi was officially entered into the *Netherlands Pharmacopaeia.*

In and outside the Netherlands, physicians started using the Penghawar Djambi as a styptic. The results were generally satisfactory.

One doctor Vinke from Leningrad, for instance, compared the hemostyptic results of Penghawar djambi, of agaric and sponge. Spontaneous clotting took 20 minutes, clotting with agaric 10 1/2 minutes, with sponge 9 minutes, but with the golden hairs only two minutes (22).

In the clinic of professor Mikulicz (1850-1905) Penghawar djambi was generally used as a potent hemostyptic. The german firm of Hartmann in Heidenheim, manufacturers of surgical dressings, marketed a mixture of cotton-wool and the golden fern under the brandname of « Penghawarwatte ». Especially in the Ear-Nose and Throat Departments Penghawar cottonwool proved a wellcome addition (12, 15).

The mechanism on which the rapid clotting might be based, was still unknown. Some investigators thought it to be due to capillary activity ; others to swelling of the fibres. Another stressed the importance of the resiliance of the hairs, which caused a firm compression on the bleeding vessels (12, 15, 16, 21).

According to the hemostatic research laboratory in Utrecht, where I had a sample tested a few days ago, the hairs exert a strong agglutinating influence on the thrombocytes. They do promote the clotting of the blood. Then why — it will be asked — did this vegetable hemostyptic disappear from the medical scene ? One of the explanations may be that at the end of the nineteenth century spores of tetanusbacilli were discovered in raw hairs. However, no actual cases of infection have been reported. The main reason for its disappearance is supposed to be its scarcity in the western world. In 1890 for instance, an Indonesian Company did not succeed in filling an order of only 50 kilograms. And so, the demand gradually declined.

In the Far East, in China and Indochina, the Scythian Lamb is still a favourite medicine (7, 17). Sometimes the part of the plant with the golden hairs is sold in the markets of Bangkok as The Golden Chicken » (5). The buyer is presented with a pamphlet in Thai and Chinese, which in translation reads :

« This plant is sacred. It should be kept in households for good omen. Besides great beauty it also brings good luck...

The hairs of this plant can be used as a remedy for various injuries — such as wounds caused by a knife, axe and nails and even dog bites and scurvy — ; by placing the hairs on the bleeding spot. »

But then the leaflet urges the buyer to make a wish every time before using it as a remedy.

Even to-day the golden hairs still speak to the imagination.

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