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1771

An Inaugural









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A N  
INAUGURAL ESSAY  
ON THE  
ANTHELMINTIC QUALITY  
OF THE  
Phaeolus Zuratenfis Siliqua hirsuta,  
O R  
C O W - I T C H.

Submitted to the EXAMINATION of the  
Rev. MYLES COOPER, L. L. D. PRESIDENT,  
The GOVERNORS,  
And MEDICAL PROFESSORS  
O F  
KING'S COLLEGE, in NEW-YORK,  
For the DEGREE of DOCTOR in PHYSIC, at the  
ANNUAL COMMENCEMENT, MAY 21, 1771.

By SAMUEL KISSAM, M. B.  
*Phæbe fave, novus ingreditur tua Templa Sacerdos.*

N E W - Y O R K :

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M. DCC. LXXI.

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KISSAM



T O  
BENJAMIN KISSAM, Esq;

AND

JOHN BARD, SURGEON,

At NEW-YORK;

This ESSAY is inscribed

With RESPECT and GRATITUDE,

By their most obliged,

And most devoted,

Humble Servant,

SAMUEL KISSAM.



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A N  
I N A U G U R A L E S S A Y  
O N T H E  
A N T H E L M I N T I C Q U A L I T Y  
O F T H E  
P H A S E O L U S Z U R A T E N S I S S I L I Q U A H I R S U T A ,  
O R  
C O W - I T C H .

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**T**HE disorders of children assume such various appearances, that the most minute observers are frequently at a loss to investigate the causes of their complaints. There are four different sources from which they most commonly originate. The Meconium, the prevalence of acidity in the primæ viæ, cutting of their teeth, and worms. The latter of these shall be the subject of the following ESSAY.

WORMS which commonly infect the human body, are divided into three species; the Lumbricus or smooth round worm; the Ascarides or short pointed worm; and the Tinea or jointed tape worm. The two former most frequently produce disorders in children; the latter, though children are sometimes afflicted with them, seems more peculiar to adults, and is not unfrequently the source of complaint in them.

VARIOUS opinions have been conceived concerning the generation of worms: it appears however unquestionable, that they are produced from the ova of insects living in the air, and deposited in some part of the aliment, by which they are conveyed into the stomach; where, if the digestive powers are not sufficiently strong for their destruction, they grow to maturity: and hence are most peculiar to children, and persons of languid imperfect digestions, being scarce ever discovered in vigorous healthy adults. Some kinds of diet are more particularly favourable to the production of worms, especially that which consists of raw vegetables: Hence there is no country in which  
they



they are more prevalent than in Surinam, where the slaves are almost wholly fed upon Plantens and Bananoes, which are frequently eaten raw, both by adults and children: and the verminous ova contained in them left undeftroyed in the ftomachs of the latter; and thofe of the former, whofe digeftive organs are weak and languid.

WORMS prove pernicious by obftructing the inteftines, and comprreffing the neighbouring parts; by confuming the chyle intended for the nourifhment of the patient, and by irritating and inflaming the internal coat of the guts; and fometimes\* perforating them. Hence the fymptoms which ufually attend children afflicted with worms, are an offensive breath, frequent, fudden and tranfient pains in different parts of the belly, an unusual flow of fpittle from the mouth, efpecially when the ftomach is empty, an itching of the nofe, which they frequently rub, an irregular appetite, fometimes voracious, at others entirely wanting; a difpofition to puke, and frequent ftools of crude indigefted matter, an unhealthy countenance vary-

\* Tiffot on Health, p. 388.

ing often in a day: The belly is larger than in health, whilst the other parts of the body are meagre; an unusual lassitude, and a melancholy aspect: The eyes are surrounded with a livid circle, their sleep most commonly interrupted with starting and terrifying dreams, a frequent grinding of the teeth, a pale coloured urine, an irregular pulse, and sometimes a profound drowsiness: They are often afflicted with swooning, convulsions, cold sweats, and fevers, both with inflammatory and malignant appearances, attended with an unquenchable thirst. They have a small dry cough, a difficulty of breathing, with one hand frequently applied to the throat. They have palsies of the extremities, with a loss of sight and speech, their gums appear to be corroded, and the head is sometimes irresistably thrown back as in a Tetanus.

THESE symptoms however, are so far from being peculiar to complaints arising solely from worms, that many of them constitute disorders wholly independent of such vermin. There is nevertheless great reason to believe, that all the  
above

above enumerated symptoms have often had their origin from that source alone. Hence arises the difficulty of forming an invariable diagnostic of the existence of worms as the source of complaints in children; there are such variety of symptoms in different cases, that no one can be assigned as an invariable rule for such a determination. This difficulty however should not discourage the exhibition of remedies for their destruction; provided such remedies do not interfere with the indications of cure under the prevailing symptoms; nor should a blind enthusiastic opinion that all inflammatory appearances in the disorders of children denote the prevalence of worms, prevent the timely use of antiphlogistics; this would be as absurd as to suppose that children could not be obnoxious to inflammatory complaints. Such opinions prevail at the present day; but they are dangerous in a profession where reason as well as experience ought to have some influence in our determinations.

VARIOUS are the effects produced by worms in different constitutions; in some children who have  
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but few, they produce many alarming symptoms: others in whom they enormously abound, find little inconvenience from them; whether this difference results from any peculiar disposition in one patient to be more acutely sensible of impressions conveyed by such animals, or whether supposing the constitution of each to possess an equal degree of sensibility; the activity of the animals proves injurious to the one, and their inactivity harmless to the other: or whether it results from their situation in the alimentary passage, is not yet fully determined. It appears however indisputable, that the latter has some share in constituting this difference; there can be no other rational method of accounting for many of the symptoms which occur. Those in whom worms prevail could not be deprived of the benefit of their food was not the situation of such animals above the cæcum: The chyle would pursue its wonted course into the lacteals, and the nourishment of the patient could meet with no interruption; nor is it unreasonable to suppose that an insatiable appetite denotes the stomach

to be the place of their existence: because in no other situation could they effect so immediate a consumption of the food as to produce that quick successive hunger of which children often complain. Hence I would infer that worms may prove much more injurious, by being situate in the stomach and small intestines, than in the large; in the former they not only irritate and obstruct them, but deprive the patient of his nourishment. In the latter, the irritation and obstruction, is the only injury to which he would be liable.

To enter into a minute detail of the ratio symptomatum produced by worms, would be a task to which I confess myself unequal; nor does there seem to be much necessity for such an undertaking, since the efficacy of remedies offered for their destruction, cannot by that means be increased.

THE most powerful vermifuges with which we have hitherto been acquainted, are preparations of Mercury, Aloes, Rhubarb, Jallap,  
Steel,

Steel, Tin, Sulphur, and a variety of others, too tedious to mention. The active properties of which many of these are composed, render them unsafe when given in large doses, and when exhibited in the usual dose, they prove insufficient for the destruction of worms. There is one other remedy however, which is I believe unknown, as a vermifuge in the northern parts of America.----The *Phaseolus Zuratensis siliqua hirsuta*, or Cow-itch. Its efficacy is indisputable; nor will it be attended with the same objections to which the others are liable. The part of this plant which is made use of, is the hairy substance growing on the outside of the pod. It is composed of an assemblage of exquisitely fine spicula, so acutely pointed, as when applied to the skin, to excite an intolerable itching and inflammation of the part. Hence when suggested to me as a vermifuge, I apprehended dangerous consequences from its contact with the coats of the stomach and intestines; nor could I be prevailed upon to retract my opinion, until experience had convinced me of its safety.

THE method in which it is usually given, is in the the form of a thin electuary, mixed either with molasses or common sirup, until it acquires that consistence; a tea spoon full of which may be given to a child of two, three or four years old, and double that quantity to an adult; in this manner it is to be continued for three succeeding mornings, after which a dose of rhubarb may be given to advantage.

AT first I attributed the innocence of this remedy when taken into the stomach, to the manner of exhibiting it. Supposing that by the sirup, the elasticity of its parts might in some measure be impaired, and become less active than in its dry and simple state: But the following experiment proved my conjecture to have no foundation in truth.

I applied to the back of one of my hands a small quantity of dry Cow-Itch, and to the other at the same time, nearly the same quantity intimately blended with sirup, agreeable to the

above prescription, without being able to discover the least perceivable difference in its operation, either in point of time or severity: Hence I think it indisputable that the stimulating properties of the Cow-Itch are carried into the stomach with it. The stomach is doubtless insensible of its operation: Willing to believe that this insensibility was owing to some assignable cause, I imputed it to the mucus with which the stomach is lined; supposing it to possess a power of sheathing the points of the spicula, and by that means lessening their activity. But there seems little necessity for such a supposition, since the tongue and roof of the mouth are equally insensible of its effects, independent of any properties in the saliva or mucus to prevent its operation. This will be best illustrated by experiment.

I MIXED with Saliva a small quantity of Cow-Itch, and applied it to the back of my hand, then took the same quantity of dry Cow-Itch into my mouth; that upon my hand speedily produced a very sensible irritation, whilst



whilst my tongue and the roof of my mouth were entirely free from the least perceivable uneasiness.

ALTHO' the whole alimentary passage seems to be insensible of this stimulus, yet I cannot conceive any other quality on which its efficacy as a vermifuge depends, especially after having given it to worm patients, both in tincture and decoction without the least sensible advantage. This opinion however will be still less liable to objections, by attending to the following experiment.

To several common earth worms, which have such a similitude to one species of worms infesting the human body, that Linnæus in his description has made no distinction between them, I applied when motionless and undisturbed, a quantity of dry Cow-Itch; in every instance, the moment it touched them, they discovered signs of pain, by immediate and brisk agitation; nor was the effect less considerable upon the application of it when mixed with sirup or molasses: If freely applied in either way it produces a slow but inevitable death.

THERE is something in the corrosive sublimate particularly deliterious to worms. One single drop from an ounce of water, wherein one grain of well levigated sublimate is dissolved, being dropped upon an earth worm instantly produces the most violent convulsions; and if confined in the same solution for the space of five minutes it is inevitable death. Less than half a grain of sublimate being applied in substance upon an earth worm effects his destruction in two minutes. Whether enough of the solution might not be given to prove destructive of worms, without being injurious to the human body, wants the test of experience. There is no medicine in the whole catalogue of vermifuges which proves deliterious to worms from its stimulating quality, but which likewise proves stimulating to the nervous coat of the stomach and intestines; hence their exhibition is attended with danger: But the Cow-Itch seems perfectly inoffensive to the human body, and yet contains all that is necessary for the destruction of worms. I recommend its exhibition, I am confident both of its safety and utility.







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