

Präparirübungen am Pferd. Von Dr. med. vet. Reinold Schmaltz, Professor der Anatomie an der Thierärztlichen Hochschule zu Berlin. Theil III. Berlin: Richard Schoetz, 1903.

THIS, the concluding part of Professor Schmaltz's dissection manual on the horse, deals with the organs of the thorax, abdomen, and pelvis, and also with the brain, eye, and larynx. To describe the work as a dissection manual is, however, likely to convey, at least to English readers, an inaccurate idea of its plan and scope, for in the arrangement of the matter the book differs considerably from any of the guides to dissection provided for the use of medical or veterinary students in this country. It differs from these mainly in that more space is devoted to the operations necessary for the proper exposure of the various organs, whether for the purpose of ordinary dissection or for *post-mortem* examination in the case of disease, and some objection might be taken to the arrangement of the matter, inasmuch as in most cases detailed descriptions of the anatomy and connections of the organs precede the directions with regard to the operations necessary to bring the different objects into proper view. In all other respects the work is deserving of the highest commendation. It extends to 335 pages, and the illustrations in the text, twenty-four in number, are for the most part excellent. Of even higher merit are four plates, with eight figures, illustrating the anatomy of the brain.

## CLINICAL ARTICLES.

### POISONING OF CATTLE BY COMMON CELANDINE.

By H. CAULTON REEKS, F.R.C.V.S., Spalding.

ALTHOUGH I have some dim recollection of reading of previous cases of this kind, I find myself unable to turn up recorded instances. It seems that such are few, in which case the history of the following should prove of interest. To commence with, a description of the plant may not be out of place.

Bentham and Hooker, in their fifth edition of *British Flora*, describe it thus:—

"*Chelidonium majus*. *Common Celandine*. A genus of Papaveraceæ reduced now to a single species. Rootstock perennial. Stems erect, slender, branching, one to two feet high, full of a yellow, foetid juice, and generally bearing a few spreading hairs. Leaves thin, glaucous underneath, once or twice pinnate, the segments ovate, coarsely toothed or lobed, the stalks often dilated into a kind of false stipules. Flowers small and yellow, three to six together, in a loose umbel, on a long peduncle. Pod nearly cylindrical, glabrous, one and a half to two inches long.

"On roadsides and waste places throughout Europe and Russian Asia, except the extreme north. In Britain, chiefly near houses. Frequent in England and in some parts of Ireland, less so in Scotland. Flowers all summer. Common or countryside names for the plant

are many ; and it is known variously as Swallow-wort, Teter-wort, Wart-wort or Wart-weed."

All this contains no mention of its poisonous nature. Other authorities, however, agree in recognising its dangerous properties. For example :—

Woodman and Tidy, *Forensic Medicine and Toxicology*, state that it is poisonous, but do not quote cases.

Bentley, *Manual of Botany*, states : "The Celandine is a native of this country, growing in the neighbourhood of villages. It has an orange-coloured juice of a poisonous nature, which is a popular



*Chelidonium majus*, with fully expanded flower, buds, leaves, and fruit.  
One of the pods dehiscent.<sup>1</sup>

external application for the cure of warts, and has been used successfully in opacities of the cornea. It has been also administered internally, and is reputed aperient, diuretic, and stimulant."

Cassell & Co.'s *Encyclopædic Dictionary* contains : "It is full of a yellow juice which is of an acrid poisonous nature, and has been used in certain diseases of the eye, and as a caustic to destroy warts, etc. . . . Its juice is a virulent acrid poison."

*Year Book of Pharmacy*, 1897 : "Chelidonine is recommended in the place of opiates for the relief of pain in the stomach and bowels, and as a sedative in ulcerative conditions of the stomach."

<sup>1</sup> This illustration is copied from *School Botany*, by John Lindley, M.D., Ph.D., F.R.S.

Other authorities mention among its many alkaloids (some eighteen in number) the presence of the narcotics Chelidonium and Chelerythrine, and the existence of various bitter irritants. It is reputed also to act as a drastic purgative, and to produce in animals eating it vomiting, loss of sight and hearing, inability to stand, and death.

I have thought it well to refer to these in full, as it will be seen from them that the plant contains both narcotics and irritants. With a knowledge of these facts, the symptoms in a suspected case of poisoning from it may be set at their true value, and the absence of purging in the cases I am about to relate accounted for.

*History.*—3rd October. I received a wire from a client five miles from home requesting my immediate attendance. On my arrival I found two valuable pedigree cows lying dead in the yard, and the remainder of the herd, nineteen in number, perfectly healthy. For some time past these cows had been allowed to graze in a large field adjoining the house, but at night had regularly been yarded for feeding and shelter. The illnesses had occurred while at grass, and had given but little premonitory warning of death.

Knowing anthrax to have been declared on the farm but a short time before, I was naturally suspicious, and declined to hold a *post-mortem* before making a microscopic examination of the blood. So far as anthrax was concerned, my investigation was negative, and I wired the owner to that effect the same evening, after which I received from him no further instructions.

6th October. I met the owner in Spalding, and was surprised to hear that, in order to avoid the spilling of blood on his farm, he had commissioned a veterinary surgeon in a neighbouring town to make the *post-mortem* on these two cows in a knacker's yard. This gentleman's report was unproductive of help, save that he mentioned a slight condition of inflamed fourth stomach.

I now suggested to the owner the advisability of carefully investigating the field in which these animals were grazing, expressing the opinion that it was there the mischief would be found, for a mass of eliminative evidence had already placed the food in the yard beyond suspicion. Our greatest piece of evidence of this description was the fact that a herd in an adjoining yard, all the members of which had kept well, was being identically fed on the same food, with the sole exception of being shut off from this particular field.

My suggestion was treated lightly. The owner was one of those unfortunate individuals whose strength of will far exceeds the supply of ordinary knowledge at their command necessary to guide it into right channels. In other words, he was obstinate. He persisted in putting the outbreak down as "some undiscovered disease" that veterinary surgeons were as yet quite unaware of, and somewhat pooh-poohed, if not altogether ridiculed, the idea of anything poisonous existing in the field which he and his had known for generations. Already I had reluctantly decided to put the cases in my category of "deaths from undiscovered causes." The owner, however, was fated to be compelled to further assist in the elucidation of the mystery. He was called to his senses by the death of two more of the herd.

10th October. Again I was wired for. One cow was dead, another

ill. The herd was again in the yard, having been shut in since six o'clock the previous evening. The ailing cow simply appeared drowsy, the remainder of the animals, as before, healthy. Before making the autopsy I decided first to examine the field, and a very short search served to discover large quantities of the celandine in one of the hedge-rows. I immediately pointed out to the owner that this was extremely poisonous, but did not rest satisfied until I had searched the rest of the ground. Finding nothing further, we were thrown back on the celandine as the cause of the mischief, especially as it bore plentiful evidence of being "topped" by the cattle.

It was now that I made the *post-mortem*, hoping to find in the rumen confirmatory evidence in the shape of undigested leaves, stems, or fruits. I was disappointed. Everything was in a pulpy, finely divided condition. I was able, however, to point out to the owner two facts—the very succulent nature of the plant we suspected, and the twelve hours of digestion that had gone on since the animals were shut in from the field. Those facts taken together did not promise the finding of undigested material. As a matter of fact, the only substances that had at all withstood the actions of the stomach juices were the stalks of some dried lucerne and clover, together with the chopped straw the animals had received overnight. This led me now to examine the ailing cow more minutely.

*Symptoms.*—There was a previous history of a large flow of saliva and inordinate thirst. Now, however, one had great difficulty in picking her out from the rest of the herd. Beyond a somewhat sleepy expression of the eyes and half-closed lids, nothing was to be noticed. When moved, however, the gait was uncertain, and, if pushed, staggering. The bowels were torpid, but the kidneys unusually active, the shepherd remarking that there were three or four of the animals constantly staling, this one among them.

Remembering that the suspected plant was a species of the poppy family, and, fortunately for myself, being then ignorant of its sometimes purgative action, I assumed its poisonous principle to be narcotic, thus confirming to myself the opinion I had already formulated that the celandine was responsible for the illnesses. Thereupon I decided to administer a combined dose of linseed and castor oils, with the addition of *nux vomica* to counteract the sedative action of the poison. This prepared, we attempted to secure the cow. The excitement this caused her, however, appeared to increase the symptoms of intoxication. At the first movement to touch her, with a preliminary frantic bellow, she fell to the ground in convulsions, limbs outstretched and quivering, constant moaning and beating about of the head, and eyes drawn back out of sight into the orbits. From this she appeared somewhat to rally, at the end of ten or fifteen minutes endeavouring to sit upon her sternum, and looking round with signs of returning consciousness. Even now a near approach to her served to bring about a repetition of the convulsive state. I ventured, however, upon a hypodermic dose of a stimulant, unhappily without effect. An hour or two later she was dead.

I should mention in passing that each of these cows was suckling a calf, and that in neither instance was the calf affected.

*Treatment.*—The remaining eighteen cows were treated with saline and oleaginous purgatives.

11th October. I visited the herd again, found the purgatives operating upon some, but not all, and, with the exception of slight symptoms of sleepiness in one or two, the other cattle healthy.

12th October. One of the cows was still exhibiting these symptoms of drowsiness, and had not yet responded to the purgative. A further dose of castor oil was given her.

13th October.—This cow was still ill. From now until 16th October she gradually grew worse, showing marked symptoms of gastro-enteritis and bladder or kidney irritation. On the latter date an offensive purge set in, and later in the day she expired from exhaustion.

*Remarks.* It would appear from what I could gather from the men on the farm that these cows had been in the habit of picking at this plant more or less all the summer, and without ill effects. From this it is fair to assume that in all probability the poisonous principles within it reach their height of activity in the autumn, that is to say, when the plant is in full fruit. With many of our poisonous plants I think that is a point to be remembered.

Another point of interest to veterinary surgeons is this—had this been a herd of cattle other than cows these cases would possibly not have happened. Cows are proverbially mischievous, and for what reason they should forsake the ten to twenty acres of luxuriant herbage for the poisonous growths of a hedgerow is a point only to be appreciated by those who are well acquainted with their habits.

These cases also form a striking illustration of the manner in which a number of small causes combine to a great one. The hedge—some 120 yards of it—in which the celandine was growing had in the early part of the summer been what is called in this district “split.” It had been divided down its centre, and one half of it, that on the inside of the field, removed. This operation had given to the celandine the benefit of a more than ordinary supply of fresh air, moisture, and sunlight. The result was a luxuriant and extraordinarily robust crop. A further point still, it had been placed still more within the reach of the cattle in the field.

## A CASE OF “BUTTRESS FOOT,” OR FRACTURE OF THE PYRAMIDAL PROCESS OF THE PEDAL BONE.

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THE subject of this note was a chestnut mare, nine years old, and used for omnibus work.

*History.*—For about two months the mare was lame on the off fore leg, and in spite of treatment the condition became steadily worse. The off fore foot was rather long and narrow, and the fetlock joint was inclined to be bowed outwards, but the degree of lameness was out of proportion to these defects, and the diagnosis was obscure.

Median neurectomy was performed on the 10th May 1902, and reduced the lameness to about half of what it was before. On the 5th June ulnar neurectomy was performed, with the result that the mare became sound and went to work three weeks later. She continued to work soundly and well, being inspected from time to time.