



A short history of the horse, and progress of horse knowledge

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A
SHORT HISTORY
OF THE
HORSE,
AND
PROGRESS OF HORSE KNOWLEDGE.

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SHORT HISTORY,

&c.

History of the Progress of Horse Knowledge.

As there does not appear to be at this time any connected history of the advancement of horse knowledge in the world, and thinking such might be useful, I have endeavoured to supply this defect, in an imperfect way, by placing together and arranging, as well as I could, the matter which presented to me, or my reading had supplied me with, forming it into a separate book, and hoping it may in some degree contribute to the better knowledge of this animal, his milder treatment, and the advancement of the interests of society in his use.

My first intention in writing it was merely to give it as a short introduction to the anatomy of this animal as it formerly stood in Rees's Cyclopædia, where it appeared in a very concise manner about sixteen years ago: being desirous of publishing that article again separately, I began upon this history as introductory to it, but finding it extend beyond the limits I had at all intended, I changed my plan, and determined on making it a distinct Treatise, and was obliged therefore to reprint the title and the first two or three pages. Having premised these circumstances, I shall not detain the reader longer by any prefatory matter, or take up his time by the unprofitable ceremonies of an adulatory dedication.

I divide the matter of this History into two parts, in order to give it more clearness ; *the first contains the History of the Horse from the earliest times to the decline of the Roman Empire : the second including from the decay of the Roman Empire to the present period.*

It is not unreasonable to apprehend, that in the very earliest ages of the world, and when man was placed in a state of almost ignorant nature, and surrounded with various animals of whose properties he was unacquainted, that he would require a considerable time in ascertaining their various uses.* The more subordinate animals would, it is reasonable to believe, first invite his attempts at subjugation, and, when grown familiar to them and encouraged by their useful services, he would extend his dominion to the more difficult and nobler objects placed before him : hence it appears very probable (and the most ancient records of any, the Sacred Scriptures, would seem to confirm it) that the use of the ass preceded that of the horse for some time. In these writings we are told that the venerable patriarch Abraham (though probably surrounded with all that the wealth of those times could afford) rode on an ass in going to the Mount to fulfil the awful command of the Almighty in sacrificing his son Isaac; laying thus, by so great an act of self-denial, an acceptable foundation for the true religion. It is also probable that in this eastern part of the world the *camel* was in use before the horse for riding upon, as ten of these were dispatched by Abraham to bring Rachael from her father's house, she being placed on one of them ; not the docility of the animal only, but his back also, seemed formed with a natural saddle for the burden. That the reduction of the horse to a state of servitude did not take place for some time after the first ages, is also rendered probable from his not being mentioned with the other animals in situations where it could hardly have escaped notice had he then been in use ; one in particular we may point out, where it is recorded, that when Pharoah, the lord of Egypt, endeavoured to seduce the wife of Abraham, he set before him for his indulgence the richest of his treasures, placing at his disposal "*sheep, oxen, asses, and camels ;*" but it is singular no mention is made of the horse. That the ass was first used seems farther confirmed in that Jacob's sons conveyed the corn they received in Egypt home to their father's house wholly on the backs of asses. *Genesis*, ch. 44, v. 13.—And, no kind of shoeing being known at this period, he would better serve in rough and ill-formed roads as

* On Adam was graciously conferred by the Almighty the necessary knowledge of these animals. How far this might have descended to his successors we are not informed ; perhaps it did not descend in any considerable degree.

was the case probably then, than the Horse, whose feet, more nobly formed and constructed, are in reality more sensitive and not so obtuse as those of the Ass. The step of the Ass, also, is more exact and carefully made. Jacob, in departing from Laban, placed his sons and daughters on Camels, and it is curious that an exact enumeration of his stock of animals is given with no mention of the Horse among them—200 she goats—20 he goats—200 ewes and 20 rams—30 milch camels with their colts—40 kine and 10 bulls—90 she asses and 10 foals,—so that in this Land of Canaan there is reason to suppose the Horse was hardly in use at this time. In the latter part of the life of Jacob, however, who lived to be 147 years old, we find the first mention of the Horse in the following manner. That Jacob's sons, in order to obtain corn, on account of the famine that prevailed in Canaan, "*took to the Egyptians Horses, flocks of Herds, and Asses, delivering them to Joseph for the use of Pharoah.*" Chap. 47, v. 17.

And not long after this, from the familiar metaphoric allusion to the Horse by Jacob at the point of death and prophesying the characters of the future twelve tribes of Israel, one might conclude that the Horse had become well known, since he says, "*Dan shall be a serpent by the way, an adder in the path, that biteth the Horse's heels, so that his rider shall fall backwards.*" Chap. 49, v. 17. And Joseph, soon after this, going up from Egypt with the body of his father Jacob for burial in the land of Canaan, "*had with him a large company of chariots and horsemen.*"

This active and ingenious nation of Egyptians, soon familiar with his use, did not long delay to employ this noble auxiliary to the purposes of war and human destruction. And accordingly some reigns after this, or in about the period of two hundred and fifty years, all the mighty host of Pharoah, with his chariots and horsemen, were, by a signal miracle from heaven, drowned in the Red Sea. This event, according to the best chronologers, happened in the year 3216 of the Julian computation, or 1556 years before the birth of our Saviour.

We are now to pass from these simple annals of nature and truth into the wild and extravagant fictions of the Greeks, who dressed in metaphor and quaint conceits all they received from these Egyptians, as though they were jealous of admitting from whence they really received their knowledge, or at any rate chose rather to cloak it in the language of ambiguity and mystery.

The Greeks, and after them the Romans, impute to *Erichthonius* the discovery of the use of the Horse, or at least of his application to the chariot.

*Primus Erichthonius currus et quatuor ausus
Jungere equos, rapidusque rotis insistere victor.*—*Virg. Georg.* lib. 3, v. 133.

Pliny also says, *Bigas primum junxit Phrygum natio, quadrigas Erichthonius.* Lib. 7, cap. 56.

It would appear, however, from the researches of a learned Antiquary of Berne in Switzerland (Samuel Schmidt), that this famous *Erichthonius* was no other than the Horse-breaker of the Egyptians, it being the general expression or phrase in this

language of the breaker-in of the Horse, which Grecianized was made Ericthonius. He observes that the Thessalians, or inhabitants of Thessaly, were ancient Egyptian colonists, and that two other colonies afterwards arrived in Greece from Egypt, and were distinguished by the titles of the Argos and the Athenian Colonies.

The Athenian Colony had for its leader Cecrops, in Coptic, *Cecrop*, the Greeks always adding an *s* to the final *p*, as in Pelop, Pelops; and in the Egyptian language this name was Sigraph, signifying conjunction or mixture, or of a mixed nature; some believe that he derived it from being of the figure of a Man upwards, and below of a Serpent; others that he obtained this name from being the institutor of marriages at Athens. This Cecropian colony began the Attic æra, and was estimated between 3 and 400 years before the taking of Troy, or about 3132 of the Julian period, or 1582 before Christ. And Honorius, Tricusphus, and Augustin, say that the Children of Israel passed out of Egypt while Cecrops reigned in Athens. Cecrops was also placed among the signs of the Zodiac for Aquarius, to record that before wine was used in sacrifices, water was employed; for the Egyptians held wine in abhorrence, and hence it became with other nations an abomination, as with the Magi, Gnostics, Arabians, Brachmans, and Monks of China; and God permitted the Jews to use wine in their sacrifices, in order that they might be distinguished from all other nations. After this first Colony of Athens came a second, about 1082, or 500 years before Christ, which was that of Ericthonius or Erictheus. It was during his time, if not his own act, according to Diodorus Siculus, that quantities of Corn were brought into Athens on account of a severe famine that then prevailed, and this favor was conferred on these Athenians because the colony was anciently from Egypt, established by Cecrops. To reward this act, the Athenians made him King, and gave to his brother Butes the priesthood of the holy Temple of Minerva and Neptune. And this Ericthonius, they say, taught the Eleusinian Mysteries of Ceres, perhaps a metaphorical allusion to the corn that he had supplied them with, and the arts of agriculture which he might have taught them.

“Those have erred widely who have derived this name Ericthonius from the Greek language, since in the Egyptian appears to be the natural clue to it. *Erietho*, the ancient Egyptian word of which the Greeks made Erictheus and Ericthonius, as of Apollo they made Apollonius, is composed of two parts, *eri*, *facere*, vel *rei alicujus auctorem esse* and *chto* or *ichto*, *Equus*, the Horse, and hence Erictho, Autor Equitatus et Equorum, the occupation constantly ascribed to Ericthonius, as seen in the preceding lines of Virgil. Aristides and others confirm this by observing that he first tamed the Horse and then applied him to the chariot. It was on this account that he was placed among the constellations under the name of Auriga, Agitator, or Heniochus, the driver or charioteer.”

What throws new light on this conjecture and confirms this etymology is, that Ericthonius or Erictheus was one of the surnames of Neptune; hence Lycophron

Tzetzes, Hesychius, and others, say that Erictheus was Neptune with the Athenians. Plutarch also in two places makes mention of Neptune Ericthonius; and Sophocles and Diodorus Siculus attest the fact that he was considered the first inventor of Equitation among the Greeks. Pausanias also speaks of an Equestrian Statue of Neptune at Athens, to account for the ancient surname *ἵππος*, or the Horse, that was given to Neptune.

The Hymns of Homer give two occupations to Neptune, that of Navigation and Equitation, *Διχθα τοι*, &c. and hence afterwards in Italy the Etruscans represented Neptune drawn in a car by Horses, and hence also Romulus dedicated to Neptune the Games called *Censualia*, in which they were used to place crowns on the Horses. And from this the Ancients went still farther, and considered Neptune not merely the Inventor of Equitation, but that he invented the Horse himself and that it was created by him; hence it is common to see in mythological sculpture, Neptune striking with his trident the earth, out of which immediately arose the Horse. Thus Lucan says:

*Primus ab æquora percussis cuspide saxi
Thessalicus sonipes bellis feralibus omen
Exiit.*

And Virgil in the same manner:

*....Tuque ó cui prima frementem
Fudit Equum, magno tellus percussu tridenti
Neptune! Georgic, v. 13.*

And hence *Pamphilus*, the most ancient hymnographer of Athens, calls him *ἵππων δότερα*, or the Giver of the Horse.

Whence, it might be asked, was Neptune attached to Erictheus? Was it that this colony of Egyptians came by sea into Greece, of which this stood for a symbolical or emblematical representation, and hence Equitation became the ancient emblem of Navigation, or "that the managed Horse appeared to them to be steered by the rein as the ship at sea is governed by the helm?" Mons. Frenet in his ingenious Reflections upon the fable of Bellerophon, observes that the Pegasus of this hero was merely a vessel used by him in his expedition, and hence also Neptune in his dispute with Minerva made the *Horse* to rise out of the ground, signifying merely that he advised them to the practice of Navigation: *Minerva*, again, on his part, caused the *Olive Tree* to rise out of the ground, that is, he counselled them to pursue Agriculture.

The wooden Horse of Homer was perhaps no other than a ship or ships which conveyed the troops to the coasts of Troy; as Plautus seems to confirm;

*Nempe Equo ligneo per vias cæruleas
Estis vecti.*

It appears therefore, in concurrence with History, that on the rocky coasts of Thessaly the Egyptians first landed with their managed Horses, and so this part became renowned for horses and riding, and in this place originated the fiction of the Centaurs, half man and half beast, the rider and his horse formed into one by their fanciful imaginations, which appears also to have had a moral interpretation in the subjugation of the natural will, and so the beast, or the man, was said to prevail.

These Centaurs were described by Homer as inhabiting Mount Pelion. Lib. 2, v. 900.

Here also flourished Chiron, surnamed the Centaur, who is usually reputed a Thessalian, but who perhaps might have been some Egyptian, or at least of Egyptian origin, the name appears to me to strengthen this suspicion, as well as some other circumstances we shall hereafter adduce. There seems to have been with the Greeks a great reluctance of admitting the assistance they derived from their neighbours the Egyptians, and to avoid their acknowledgments, chose rather to refer these aids to fanciful gods, or ideal nymphs. With Chiron both professions were common, the human and the brute: he taught Æsculapius, from whom, it is said, sprang human medicine exclusively considered, as also from two other of his pupils, Machaon and Podalirius.

The computation of the exact period of these times is thus stated in the Short Chronology of Sir Isaac Newton, p. 14.

1035 years before Christ. "Erectheus reigns in Attica."

1034. "Erectheus having first celebrated the Panathenæa, joins Horses to a Chariot."

1019. Solomon reigns and marries the daughter of Ammon, and by means of this affinity is supplied with Horses from Egypt, and his merchants also bring Horses from thence for all the Kings of the Hittites and Syrians; for Horses came originally from Lybia, and thence Neptune was called *Equestris*.—Chron. p. 16.

960. The War between the Lapithæ and people of Thessaly, called Centaurs. P. 23.

After this period our history paces on more certain ground, and her events are no more encumbered and obscured by poetic fictions, for soon after this period lived one of the best writers and best Horsemen that the world has ever yet seen, Xenophon, the historiographer of Persia and of Greece, the hero, the moralist, and the equestrian, and himself leader of the cavalry in the celebrated retreat of the ten thousand armed Greeks to their native country from Persia, after a defeat by Artaxerxes, the Greeks being engaged in the cause of Cyrus, his brother; these, on their return, had to pass through an enemy's country surrounded with innumerable difficulties. His excellent little work *Περὶ Ἰππικῆς*, *Peri Ippikes*, gives us a most exact account of the management of the Horse, and of the practices of his time in regard to these animals. It is a work highly curious on account of its antiquity, and valuable on account of the simplicity and judgment it displays in these matters; the Greeks appear to have been so well satisfied with it, that after him no one appears to have written on the subject in this country. He composed it, as he says, for the benefit and instruction of the young people of the Athenian states, and the following epitome of its contents may be useful to those who may not have seen it, or who may wish to refer to it as containing the sentiments of this extraordinary people at this very early period of human knowledge.

"It begins with his instruction in the purchase of a Horse: the feet are particularly dwelt upon, as

of primary importance, and as there was no shoring at this time it was necessary these parts should be particularly attended to, and accordingly he directs that the hoofs be thick, strong, and lofty, (that is, not flat,) with the frogs well raised from the ground, resounding to the pavement. He then gives his judgment of what should be the make and form of every part or point of the Horse from the hoof to the top of the head, and in most of these, he agrees with our own notions of the present day. He then passes on to the growth of the foal and the rearing him. Then instructions to the man or boy who looks after him; next respecting the knowledge of the age by the teeth. On mounting and on bits; on viciousness, observing that a contumacious Horse, like a contumacious army, is of little use; therefore his obedience is to be tried on all points, which will also show his soundness. The master to have always his stable within view of his house, that he may frequent it often and see that no food be pilfered or tricks played his horses; for the Horse neglected, the master is often brought into difficulties in his performance. He in a particular manner enjoins gentleness with Horses, and forbids any to approach them with anger. On exercise and food: the feet especially to be attended to, and kept as round and hard and tough as possible, nor is wet to be allowed in the stables to rot the feet; round stones placed for them to stand and to paw upon.* Mouths, how to render them delicate to the impression of the reins. Head-stall not to hurt the ridge or top of the head or ears. *Musrole* not to prevent the jaws from opening, or throat-lash choaking them; no curry-comb to be used along the ridge of the back; on the saddle; head to be washed, not curried; *fore-top* to be kept short of the eyes and wetted, the *mane* also; hairs not to be too scrupulously removed from the inside of the *ears*; *tail* and *mane* to be washed often, to increase their growth; *mares* shorn of their mane before they will admit the ass; daily washing of the hoofs not recommended; † *perineum* to be kept clean; *hand-rubbing* of the limbs much recommended; on approaching and on leading horses; on biting him; not to lead him by the reins; on mounting in the Persian manner; not to act angrily with horses, often repented of; nor by stripes make them approach fearful objects, but to make them go from them rather; on mounting with the spear both right side and left; position on horseback; how to hold the reins; on bits; on turning and wheeling; on dismounting; on leaping; ditching; instructions for seat in leaping; exciting and soothing sounds; the fierce horse not to be bought, nor the lazy; on parade and show; bits described; further description of bits and their proper use; elegancies with horses; how to defend the neck in battle; on armour; horse's armour; thighs how to defend; legs and feet with leather gaiters; the curved sword; the spear; the long javelin, and how to send it forth with effect.

One writer appears to have even preceded Xenophon on these subjects of Horses and Equitation, as he is quoted more than once by him, this was Simon of Athens. A brazen statue of a Horse, Xenophon tells us, was placed in the Eleusinium in honor of his dexterity and excellence in the management of these animals, and the book he wrote was concealed or lodged in a hollow cavity of the pedestal. No part of his work has come down to us, but Hierocles I observe has quoted it as late as in the fourth century.

Xenophon wrote also another work on these subjects, The *Ἰππάρχικος*, or *Duties of the Master of the Horse in the Army*; pointing out the manner a good Cavalry should

* This, it must be obvious, would be useless in the modern management of feet, as the shoes would entirely prevent their operation. Fortunately for them the ancients knew nothing of the deplorable state to which the feet are reduced by modern shoeing, and the trials of patience this occasions to the rider, and the severities of bits, spurs, and whips, which are necessary to overcome the effects of their stunned, benumbed, and contracted feet.

† It probably rendered the hoofs too soft for their use without shoes, but with us an advantageous practice.

be formed, kept up, and be used. The feet are also again a subject of primary consideration in this work, their going without any defence to their feet at this period rendered this attention necessary.* In this work are many remarkable expressions of submission and reference to the divine will, that one would hardly suspect we were reading a pagan writer of this early period. Another work also his industrious pen has left us, not very remotely connected with this subject: The *Κυνηγετικόν*, or *Treatise on Dogs and Hunting*. He begins it by telling us, that Dogs and Hunting were invented by the divinities Apollo and Diana, who bestowed them first on Chiron, who transmitted them to his pupils, Æsculapius, Peleus, Telamon, Theseus, Ulysses, Castor, Pollux, Machaon, Podalirius, Achilles, and others, all of whom he says were graced and adorned in their acts by these divinities; he then further tells us that this Chiron and Jupiter were brothers but of different mothers, one of *Rhea*, the other of a Naiad Nymph! and may we not observe, that this anonymous lady was not one of the Nymphs that haunt the shady grove or chrystal fountain, but was a *Naiad* of the briny ocean, that is, came out of the sea, which sea, may we not conjecture, divided the rocky shores of Thessaly from Egypt, or in plainer words was a swarthy inhabitant of the banks of the Nile, transported in a vessel to Greece, and the wily Greek, with ambiguous reluctance, half acknowledges and half conceals the fact by this mysterious way of dressing it up. I need hardly remark that Xenophon lived about four hundred years before our Saviour.

As the arts generally follow in the train of riches and power, so Greece declining and Rome advancing, we are next led thither in pursuing our history. Towards the close of her commonwealth, two famous writers appeared on Rustic Affairs, *Marcus Portius Cato*, and *M. Terentius Varro*; but their chief aim being to treat of Husbandry, Gardening, and Rural Affairs, the Horse obtains only an incidental notice in their works, but sufficient to require our attention. The work of Cato is curious, as the most ancient of these, and, among many useful observations, contains what is omitted in the others,—the charms and superstitious incantations of his times, used in order to success, some vestiges of which are handed down to us at this day in this country. He was the father, I believe, of the noble patriot. His book is simply divided into 162 Chapters, the particulars of which we omit, in order to a more extended notice of Columella, the most perfect of these rustic writers. Varro's work is in three books, each divided into many Chapters: his first book is wholly on Agriculture, and an enumeration of the authors then extant; the second is on Animals,—the ox, the horse, the mule, the hog, the goat, the ass, &c.; and the third is on the management and observances of the Villa or Farm, and of all kinds of poultry, bees, fish, &c.

During the usurpation of Julius Cæsar and his successor, Augustus, Virgil appeared,

* The reader is referred to a short treatise on the knowledge of the ancients respecting shoeing at the end of my work on the Foot.

and beautifully handled these subjects of rural affairs in verse, in his *Georgics*; he also only makes mention of the horse incidentally and as a necessary appendage to agriculture. Also about the same time, *Cornelius Celsus*, a valuable writer, lived and wrote on the diseases of Horses and Cattle, which, except some few extracts in the Byzantine Veterinarians, appears to be lost; we learn from Columella that his work occupied five books. After these in Rome, succeeded *Lucius Junius Moderatus Columella*, who lived in the reign of Tiberius, and was born in Spain as a roman subject; and who having more plainly and usefully written on these affairs than any of the others, we consider it worth a short epitome, as affording a specimen of the arrangement and matter of these rural writers. His book seems to have been intended for the use and information of the wealthy Romans, who possessed country seats and villas. It is comprised in twelve small books, to which a thirteenth is added on the culture of trees:—

The first six books contain an account of the authors then extant on these subjects of agriculture; he then treats of soils, water, situations, descriptions of persons necessary in the culture of the villa, on fodder, on seeds, &c. and largely on the culture of the vine, elm planting, and other trees and shrubs, the olive, the apple, on grafting trees, and on the cytissus.

In the following six books he treats of *oxen*; on choosing them; their draft and their food for the different months of the year; diseases and cure; on the pestilence, gripes, swelled tongue, fever, cough, abscesses, and lamenesses; *sparteum opus* for binding up their feet; the scab; bites of rabid animals; coriago or hide-bound; ulcerated lungs; tumours of the neck and palate; foot cut by the ploughshare; horns broken; dislocations and strains; bites of vipers and adders; bites of the shrew mouse (*mus araneus*); eyes inflamed; epiphora; leeches in the throat; description of a Roman Trevis; of the shape of the bull and of the cow; on the yearly selection of cattle; on sheds and stables; on calling them at close of day from the woods, "*per sonum Buccinæ*. Age for breeding." On the worms of calves; on castrating them. On *horses*; good food requisite while the young foal is growing; rich open pastures rather than mountainous districts; a short sweet grass best; to be restrained from covering; subject to hippomanes; on their fecundation in hot climates by the south-wind! admission of the stallion; he believed that by tying up the left testicle a male was obtained, the right a female! desirable qualities in the foal, small head and black eyes; and the rest of the points are very much as stated by Xenophon, concluding in the same pointed manner respecting the hoofs that they be "hard, high, (not flat,) concave beneath; rounded coronets above the hoof, not too large; the whole body large, lofty, and erect, with an appearance of life and energy, and though long, sufficiently rounded; manners gentle, easily excited, and as easily appeased; indications of the age by the teeth; on the necessary care with horses; wheat better than barley for lean horses; on rubbing and currying them; dry stables strengthen the hoofs; floor of the stalls of oaken rafters; on fatigue and heat; inability to stale; pains of the head; jaws; arms; on bile; worms; cough; impitigenes; scabies; pupulæ; intertrigo; flies; cicatrices; dolor oculorum; refusing food; git, and on oestri."

On Mules. To chose their stock and breed them; their medicine; De Asello, *a meaner kind of Ass from Arcadia*; on *sheep*; on rams; kinds of sheep, Milesian, Calabrian, Apulian, &c. red from Asia; Pusula seu sacer ignis; Bolus Mendesium, a famous Egyptian writer on sheep, falsely called Democritus by the Greeks; diseases and remedies; management of the folds; on *goats*; on cheese-making; on *swine* and their medicines; castration; on *dogs*; his good qualities, form, and colour; diseases and remedies; canker of the ear; ticks and lice; mange; country amusements; fowls, their kinds; hen roosts; food; on sitting the eggs; of eggs; cramming fowls; on doves; on thrushes; on peacocks; on ducks; quails; on fishes; on bees; Chap. XI. on culture of the garden; Chap. XII. on candies, pickles, and preserves.

Such is the matter and the arrangement which Columella has pursued, the chiefest of the Roman agricultural writers, and whose work will ever be curious as giving us the practices and opinions of this ancient period in these affairs.

There is however another rustic writer of Rome, who has some passages respecting Horses, and this is *Palladius*; he evidently succeeded the former writers, following their plans and mixing in the same manner agriculture, horticulture, vineyards, animals, and the internal domestic arrangement of the villa. It is not exactly known in what period he wrote, some believe in Hadrian's time, and that he was a contemporary of Pliny; his own expressions seem to show that he was of Sardinia or Naples, and his language too, as Gesner observes, bespeaks a later period of Rome and is less chaste than that of his predecessors. He has divided the business of the farm and of the vineyard according to the respective months of the year. Like Vegetius and the other Romans, he instructs the bottom of the stable to be planked with hard oak and not with round stones, as Xenophon proposes. In the business of the month of May, he describes the operation of castrating, and by confining and crushing the cord between two sticks—a mode of doing it that was a few years ago introduced amongst us as a new thing; he afterwards however, describes the mode of dividing the spermatic chord with a red hot blade, and at once finishing the pain and operation, and, as we believe, very judiciously gives it the preference. Columella also recommends crushing the spermatic chord in the same way; and which, he says, was recommended by Mago. Bees appear to have had an uncommon share of the attention of Palladius, and his remarks on these will perhaps be found more close and accurate than any other of these ancient writers.

The only African work on these subjects is by *Mago Carthaginiensis*; he is quoted by Columella and probably only preceded him a few years. The work is lost; there is, however, a few scraps of his to be seen in the collection of Ruellius, fol. 37, 2, &c. which are not of great promise, and lead one the less to regret it, especially as Columella and Vegetius both had the advantage of his writings. It was originally written in the Punic tongue, as Varro informs us, and was contained in 28 volumes or books, which were translated into Latin by order of the Senate.

Rome extending her empire to weakness, divides, and from her eastern side grows out a new kingdom in Greece, Byzantium is made the seat of a new dynasty, under the appellation of Constantinople; and the cavalry of the armies of Constantine were, for the first time in the world, attended by men exclusively employed for this purpose, whose writings, having descended to us, form the collection we are about to describe; and again the Greek language becomes the language of this art.

Rome after this produced no writer of note on the horse till Vegetius in the fourth century, but the growing empire of the east under Constantine and his successors next draws our attention in that direction, as in point of time, the Greek

Veterinary writers preceded Vegetius, who was the last of the Roman or ancient writers on these subjects.

The original manuscripts from whence the Greek veterinary writers are taken are still existing in the Royal Library of Paris, and may perhaps have been in France ever since the taking of Constantinople by the Gauls in the thirteenth century, and as far as such writings are useful may contain passages of considerable interest, if intelligent and properly qualified persons were employed to make a selection. They informed me at the library the character in which they are written is very ancient, but twice that I have been to Paris, very desirous of seeing them, I could not obtain permission, it being vacation time and the library shut. The fragments published were selected by Ruellius a learned monk, by the orders of Francis, king of France, first in a Latin translation in folio, in the year 1530, and afterwards in the original Greek text in octavo, in the year 1537, both splendidly printed, so as scarcely in this respect to be surpassed by any thing of the present day.

The number of writers in this collection are about seventeen, and they appear to have been Veterinarians employed in the armies of Constantine and his successors; and several of them, from the epistolary form in which they are written, appear to have been addressed to their superior officers and friends. Two of them, however, have regular prefaces, Apsyrtus and Hierocles, as though, at some time or other, they had formed entire and separate works: the chief of these is Absyrtus, who shows more address than the rest, and after him Pelagonius, Eumelus, Hierocles, Theomnestus, &c.

We learn from Suidas that Absyrtus was a Bithynian, and served under Constantine in the Scythian war, and we gather from his own preface that he was stationed on the Ister or lower part of the Danube. Hierocles is said to have appeared in the courts of law, in trials respecting these animals, and did not, like Theomnestus and Absyrtus serve in the armies. The period in which the others lived there is no means of ascertaining, nor is it of much consequence; their papers are merely curious as giving us the state of knowledge in these arts in Greece, eight or nine hundred years after Xenophon and Simon, and they no doubt possessed the works or traditions of Chiron and his successors. It is by no means certain that some of these Byzantine writers might not have followed Vegetius, as he only quotes two or three of them. Ruellius instead of giving the labors of each separately has thrown them altogether, according to the matter treated of, which is commodious in one sense, that of comparing their opinions and prescriptions; but a separate exhibition would have been more simple and better, as he sometimes for want of knowing the subject separates matter that should have been connected, being misled by different names for the same thing.

One may gather from this collection that the work of Hierocles was written in two parts, since the preface to the second part is here preserved, in which he tells us

the singular fact, that one Micon preceded Simon in this line of writing, though much accused of ignorance by him, and it is fair to conclude with reason also, as Xenophon nor any other writer besides has ever deigned to mention him. The prescriptions of these Greeks are ill-digested farragoes, composed of many incongruous ingredients, some but little known, others altogether disused at present in medicine. In the administration of remedies of a surgical nature they were more happy, especially in topical bleeding, which they well understood, from every part of the body.

We shall conclude this account of the ancient writers by returning again to the West, in order to consider Vegetius, whose work of all the ancients is of the most interest, as it is confined solely to the consideration of the veterinary animals.

Flavius Vegetius Renatus appears to have lived in the fourth century, in the time of the emperor Valentinian the Third, and besides his book *De Arte Veterinaria*, he wrote also a celebrated work, *De re Militari*, much quoted and esteemed for its conciseness and accuracy, on the weapons and mode of war of the ancients, which he dedicated to the emperor Valentinian; some have doubted if they are by the same writer, but from the age, style, and manner, there is little room to doubt of this I believe. He seems to have been an affluent Roman, and to have kept Horses for his recreation.

His work *De Arte Veterinaria* is of sufficient importance to deserve a particular notice, more so than any other of this early period, and those who do not read the Latin language may have a tolerable notion of its matter and manner from the following brief epitome of his first book. This work has, however, come down to us in a very corrupted state, and is worthy perhaps of being published more correctly in a British edition; this may be done in very many places, by collation with the Greek writers, and especially with Columella, from whom many of the passages are almost literally taken, and exhibit plainly the corruptions of his careless transcribers. His work is divided into four books, the first of which is subdivided into sixty-four chapters; the second into sixty-five; the third into eighty-five; and the fourth is shorter and divided into twenty-eight chapters or rather scraps, for some of his chapters are only a few lines in length, and are excerpts rather than chapters. His prefaces or introductory chapters to his four books are remarkable for strong and elegant language, and carry with them sufficient evidence of their author. Better apologies for the cultivation of the science have, we believe, never been penned.

The works of Chiron seem to have been in existence in Vegetius's time, as he often quotes him, but of him and Absyrtus he does not speak in very high praise, "*eloquentiæ inopit ac sermonis ipsius vilitate sordescunt*," Lib. I. Pref. In his first chapter of the first book he gives the indications of the animal being ill: in his second chapter he numbers the disorders, making of them the mystical number seven,—*the moist; the dry; the subtercutaneous; of the joints; hardness of skin (elephantiasis); of the loins (subrenalis); and the Farcy*. In chap. 3, he describes the symptoms of the first of these

disorders, which is our *glanders*; and says the ancients called it the *profluvium atticum*. In chap. 4, he describes the *morbis aridus* or *broken wind*. Ch. 5, *morb. subtercutaneus, an inveterate and ulcerated mange*. In ch. 6, the *articularis*, which, from his description, appears to be two or three diseases mixed, of which *hide-bound* is the most prominent. Ch. 7, the *morbis farciminosus*, or *the Farcy*. Ch. 8, the *morbis subrenalis* or *strain*, apparently, or affection of the loins from lumbar knots perhaps.* Ch. 9, *elephantiasis, hide-bound and emaciation*. He then gives seven chapters to the cure of the seven disorders: beginning with the first of these, the *morbis humidus* or *glanders*, and recommends for it—

“The injection of wine and oil made warm into the nostrils, and to tie the head down with a cord to his legs, forcing him so to walk that the humor shall run out; if blood flows it is a good sign! Chap. 11, cure of *broken wind*; he compares it to a consumption, and orders for it anointing the whole body with oil, and oily remedies internally. Chap. 12, cure of the *subcutaneous disorder*; a rowel (fistula) between the fore-legs and belly, while the moon is on the wane, as the practice is in India, he says, and the humor will come away of a golden hue! tithymal root to be inserted in the opening of the rowel; *consiligo* herb and the *diapente*† with old wine; *opium* and *bay berries*, or laurel and wild cucumber-leaves cut small, also warm water and barley-meal or wheat, and to stand in a warm stable; dry food but not green, and sweating exercise that the humor may be dried up. Chap. 13, *cure of articularis*: he here introduces a curious and favorite metaphor of his, “*ut amaritudinem morbi herbarum amaritudo compugnans possit expellere*,” not sufficiently aware perhaps of the dangers of a metaphor in physic. Chap. 14, *cure of farcy*: the name he observes is derived from *farci-men*, any thing stuffed or crammed, from *farcio*, occasioned by humors forming between the skin and flesh and making collections in various parts of the body, diminishing in some places and breaking out in others. Though the disease be contagious, it may be cured if taken early, and while the internal viscera are sound: if in the very beginning of the complaint, blood may be taken, as also on its termination but not otherwise. These collections to be opened with a cautery, and it is more efficacious if done with a cautery made of copper: the wounds or openings to be dressed with tar, honey, and oil, mixed; cathartics and medicines of the bitter kind are to be administered, and *diapente* with wine, which is useful in all the diseases of the animal; afterwards the roots of elder (*ebulus*) a pound, with three gills of the best wine to be given during three days: after, one ounce of the best aloes, the same of centaury, and of *opoponax* well rubbed together and given in the wine in which the elder roots have been infused, made warm: these portions to be given during three days, that by their laxative effect, the humor may be carried off; let him be exercised to a full sweat and often, and during the administration of these remedies, let him remain night and day in the open air in the pastures, that, profiting by the herbs he may choose, and dried by the heat of the sun, and by the fresh breezes of the night and morning dews, the disease may be more easily overcome. Chap. 15, *cure of subrenal disease, (loins)*: as the subrenal disease is more full of danger, so it requires more skill to understand it, for the kidneys of the animal are affected and dissolved by it, on which account, though his front parts be sound he drags his hind after him. In this way it will be relieved: from both sides let blood be taken, or from the thighs copiously, which mixed with very sharp vinegar, is to be anointed all over the body, especially the loins; the *diapente* to be given him frequently, also very warm clysters by the anus; aloes, pyrethrum, euphorbium, pennyroyal, castor, mustard-seed, pounded salt, well pounded together, to be given in bran-tea, warm if required; warm clysters that the humors may pass off in the dung; besides, let the

* These grow from the inside of the vertebræ from too hard labour, uniting the vertebræ by ossific deposit.

† We shall give the composition of the *diapente* hereafter, and the famed *quadragarian* or *four horse powder*.

loins be vehemently and often rubbed with laurel oil and hot wine, that, from within and without, this sharp disorder may be expelled; also let the loins be cauterized, that the disease may be dried up by the force of the fire. Chap. 16, *cura elephantiasis*: in the cure of this complaint we are not by healing the external ulcers to drive it inwards to the viscera, and so produce danger; but to let blood from the plate vein (matrix), and mixing it with sharp vinegar, rub it over the whole body, also from the palate, and if the strength permit it from other parts of the body, and to be rubbed in again with vinegar. Colts also taken away from their dams and tied in the stable are apt to incur this disorder, not having the usual exercise to promote their digestion. Not only elephantiasis (a sort of inveterate mange), but all murrain disorders are helped by the diapente, and no Veterinarian is to be without the following portion to keep by him: myrrh, frankincense, pomegranate-rind, pepper, saffron, red acacia, pontic wormwood, serpyllum, betony, centaury, sagapenum, saxifrage, and peucedanum, these well pounded together, sifted, and boiled in honey, are to be kept in an earthen or glass vessel, and whose virtues increase by long keeping, of which medicine a table-spoonful heaped is a dose, in a gill of warm water, mixed with three ounces of best oil, to be given during three days; when it begins to succeed, let it be given every day with wine and oil; which drink is as good as the diapente given when the animals are seized with sickness. Colts escape through the advantage of their youth, but often however, die of it. Chap. 17, *of the malleus or murrain*,* what belongs to the cure of this terrible disorder, it is necessary abundantly to expose; for where the mortality is so great, it behoves us to omit nothing. For the destruction of innumerable herds of cattle in the fields, as well as in the stable are occasioned by it, and by the unskilful and the negligent is imputed to a necessary fate, or the divine displeasure. Although, as we have asserted before, one animal being seized, it shall spread to all the rest; separation therefore is necessary, and burying the dead at a great depth in the ground, for the smell of the dead carcasses, will be fatal to the remainder. Many causes have been assigned for this disease, some apprehending it arose from too great exertion and fatigue, or extorted efforts of too violent a kind; or from the heats of summer or winter chills; or if animals are not allowed to stale in proper time; or if they receive their corn while sweating; or if allowed to drink whilst hot, the bladder being full; or if forced after drink to sudden exercise; or from corrupted hay or barley. Indeed all these things are to be avoided as producing mischief, but the murrain especially proceeds from noxious air; for if the Southern or African wind blows, even years after, returning again it shall occasion pestilence among men and animals, destroying them by an infected, corrupted air. Wherefore the most approved drinks are necessary to assist and strengthen the health on such occasions some we have given already, others we select from every writer. The remedies against general disease are: the seed of the Ægyptian gourd, that is *coloquintida*, broken and pounded, a small cupful, adding a gill of best wine, shaking them together and then straining it, and to be given through the right nostril, that it may get at the viscera, it is also most useful for the dysentery; another of a meaner kind but not less beneficial is the green roots of the wild cucumber pounded and macerated, during one night in water, then strained, of which juice three table-spoonfuls mixed with nitre and with wine, and if the animal be free from fever, made warm, to be daily administered for seven days; also nitre well pounded and the sliced roots of wild cucumber in warm wine; also the roots of elder and of the nettle infused and strained. The following is also much commended: savin, trixago, centaury, aristolochia, bay berries, myrrh, finely powdered, a table spoonful to be given in a gill of wine. Against the attack of all diseases, bleeding from the neck, the palate, or in whatever part the disorder appears; if in the face, from the head; if anteriorly, from the arms; if posteriorly, from the hips; the blood so taken, mixed with sharp vinegar, to be rubbed over the whole body. The roots of panaces and the sea eryngium, fennel, aloes, pounded and sifted, and mixed with a gill of meal, to be given

* This dreadful disease, often the scourge of the South of Europe, seldom visits this our healthy isle. It seems inflammatory in its commencement, but soon assumes the asthenic collapse with the most putrid appearances. It visited, however, this island about the year 1745.

the animal three days in hot water. Pelagonius believes the following beneficial against all sorts of disorders: if you take a young stork before it can fly, and put it into a pipkin and close it up, and burn it and reduce it to powder, kept in a glass vessel, a large table-spoonful to be given in a gill of wine. But Chiron, the centaur, among other compositions above described, advises a young puppy scalded alive and depilated and boiled till the flesh leaves the bones, which being carefully separated, the flesh together with the broth, along with some dripping of meat, old wine and oil, and preserved with pepper and honey; to be given to every animal two small cup-fulls, warmed every day, through the mouth, till they recover. The head and legs of a kid also served in the same way; a cock also, or a white hen, served in the same way; the root of the herb lithymal* also, boiled with sweet wine, is beneficial. And to animals labouring under glanders, having a greenish or white humor running from the nostrils: human urine or goats urine, two cup-fulls with wine to be given him, and a glass of rose oil mixed with it, and thrown up the diseased nostril, which will strengthen the lungs and dry the nostril of the discharge. Chap. 18, *a yearly physic for Horses*: the heads of the ulpicum, or great garlic, as the French call it, and of sagapenum to every head half an ounce, pounded, with a glass of the best oil, and mixed with half a pint of water, to be given through the nose during the calends of July, that is, at the beginning of the dog days, the 7th and the 6th; of which, if three portions are given, it will keep the cattle an entire year free from disorder.

Ch. 19. *The composition of a suffiment or fumigation, against the murrain.* You shall choose a hollow or low place in the ground, and enclose the animal all round, whether sick or in danger of being so. Take origanum, garlic, mint, pitch, peucedanum, castor, and opopanax in equal quantities, mix them; and take as much as can be held on three fingers, and put it on live coals, and bring the animal's head and nose over the fumes in the dark, and the sharpness of the smell passing through his nose and mouth, and penetrating to his lungs, shall fill them, and will even excel medicine.

Ch. 20. *Another and stronger suffiment, which will also remove witchcraft and evil aspects.* Sulphur vivum, pitch, opopanax, acanthus, galbanum, castor, crude iris, perhaps the orris-root, as it is usually called by us, (*yroos*,) sal ammoniac, cappadocian salt, hartshorn, male and female agate, blood-stone, iron-stone, silver-stone, little sea-horses, (*equuleos marinos*,) sea tails, sea nails, sea grasses or berries, deer's marrow, cedar, tar, cuttle-fish bones, gold, and *ballucæ*.† All these mixed and set fire to will remove diseases as well from men as from animals, and will drive away devils, prevent hail-storms, and purify the air. But, if the above stones cannot be found, or, on account of the price, are omitted, the other articles will suffice.

Ch. 21. *On judicious bleeding.* All medicine, whether human or of animals, will be subject to err if a rational system does not guide it; but, if the disease and plan of cure agree, the cure is rendered certain. There is to many members and to many diseases a general remedy, that of withdrawing blood, according to the season, strength of the animal, and the age also, which the skilful veterinarian industriously considers; and if sound reason in this case does not guide him, instead of good, he may do much harm, &c.‡

Ch. 22. *On the diligence necessary in the occasional removing of blood.* Many believe it necessary yearly to bleed their animals in spring, and then to send them to grass, lest the old and corrupt blood mixing with the new, heating their nature, should endanger their health, and produce debility. Older and more skilful authors have forbid this depletion without a positive indication for it, lest, by becoming a habit, if omitted to

* A kind of spurge, still bearing that name in France.

† As none of these prescriptions are ever likely to be imitated, I do not tire the reader with the proportions or quantities of each, but give them numerically that he may entertain some notion of their multifarious pharmacy.

‡ I omit some parts of little interest, that this extract may not become too long. It will suffice to afford us a fair notion of the nosological and physiological reasoning of the fourth century, and of the articles of their pharmacy and association of them, which no description alone could exactly convey.

be done, it may produce disease. It is, therefore, right, that young animals that are well, should lose no blood, except from the palate, from which, as well young as old, the humour is to be abstracted, that the head, eyes, and brain, may be relieved. To old animals it is not useless to bleed before they go to grass. It is, however, customary with all that are bled, that they be kept the day before on lower diet, that, debilitated by the evacuation, they may not have their digestion disturbed.

To bleed, we must place the animal on level ground and bind his neck round with a chord, the tighter it is done, the more conspicuous will be the vein. Then, with a sponge and water wash and clean the vein, that it may rise more to view. With the thumb of the left hand, you press on the vein, and render it still more tumid. Then make your stroke with the fleam (*sagitta*) in the direction of the vein, having well sharpened it. Observe not to press the hand so hard as to hurt the throat or to cut the windpipe, for such may endanger the life of the animal. The vein being opened, give some hay or corn to the animal to eat, that, by the motion of the jaws, the blood shall flow more copiously. If the blood appear black and corrupt, on its flowing more pure you shall remove the food, and tie up the vein with a *fibula*. Put a plaster on the vein, that it may quickly heal, though some prefer chalk. Afterwards let him stand in a warm but shady place, and let him be fed with meal only, or, if in season, the softest hay, for seven days and nights, offering him as much water as he will drink. Wheat meal is preferable to barley, but barley if the other is not to be had. Also, observe that is the best which has grown near the sea, because it is more laxative and removes humors. The blood from the opened vein is diligently to be collected, and mixed with oil and vinegar, or other medicine that the case requires, to be rubbed over the body, especially the part it is taken from, or where the disease is thought to be: for, from certain natural reasons, as some believe, the blood itself, poured upon the affected members, excels medicine and dries up the disease, which is a dexterity in the curing that should not be omitted. Besides, after the interval of a few days after bleeding, bring forth the animal to the sun, and take blood from his palate, about the third ridge of the palate, beyond the tushes: let him have soft meat and bran, and his head be held up on account of the flow of blood. After some days, let him return to his barley, but by little at a time, increasing it every day. Afterwards, if the weather be warm, let him be led to the sea or the river, and, after washing, be carefully covered warm. With wine and oil let him also be diligently rubbed in the sun, that his body being warmed may repel or carry off the disorder, which being done, the very useful horse may again return to his labour and exercises.

Chap. 23. Castrated animals are not to be bled: for this reason, that they have lost part of their strength with their testicles, and therefore become further debilitated by it. Asses, for the same reason, are not to be bled, because they have naturally less blood and smaller veins. Chap. 24: Stallions are also not to be bled, for part of their strength and blood is carried off by coition. If they cease, however, from covering, they fall into blindness, because what they lost by coition now flies to the eyes.

Chap. 25. *In what diseases and from what parts blood may be taken.* In diseases, and where the whole body is affected as in fever, the blood should be taken from the plat-vein.* In diseases of the head, in staggers, madness, stomach affections, falling fits, frenzy, planet-struck, or furious, blood is to be removed from the ears, or, which is better, from the temples. Three fingers' width below the arch of the temples, and below the artery, is the vein, and, from both, blood is to be drawn. However, in affections of the eyes, the angular veins proceeding from the corner of the eye are to be opened, four inches below the orbit. Where there is want of appetite, or swelling of the arteries or jaws, or dejection of the head, the blood is to be removed from the palate. But where the lungs or the liver are affected, or the viscera connected with them, blood is to be taken from the chest, in the flexure where it is conjoined to the shoulder. If the arm is affected, from the fore-arm, the blood is to be taken, the veins being on the inside of it, two or three fingers below the swell of the muscles, and six above the knee. Let these veins be struck cautiously, because they are mixed with the tendons; but if the joints are disordered, or have been wrenched or strained, the blood should be removed

* From the French word *plat*, *flat*, as is the inside of the horse's thigh.

from the vein of the fetlock, three fingers below the joint, which veins are to be touched with the greatest caution, on account of the tendons. Or, if the foot hath been strained, let the blood be taken from the coronets. Chap. 26, *On taking blood from the hoof, or from those who have cast their hoofs:* Horse's feet having a suffusion or deposit of humor, or the hoof distorted by violence, or have been long lame in the feet, are cured in this way. You shall rasp down the whole hoof to the quick, paring the frog, vehemently binding a chord below the fetlock, cutting round the sole, and removing the hoof in part from the coronet. You shall then introduce a sharp knife round the sole where it has been cut away, and unloosing the chord below the fetlock, the blood will be seen to flow: after it has flowed sufficiently, mix some of it with salt, and afterwards anoint it with vinegar and oil, and tie it up carefully, making him a shoe of Spanish broom, that the hoof, rid of its humors, may grow up. This, however, is so painful an operation, that only one foot can be so treated at a time, that, in case the other foot is affected, it must be done as the former grows up and is healed.

The remainder of this chapter is so obscure and little interesting that I omit it.

Chap. 27. *From what parts blood is to be taken with horses affected with lock-jaw, convulsions, colic, or gripes, or have the subrenal distemper.* With such the tail is the part to bleed from, though, as the intestines are concerned, it is thought best to do it from these viscera. If taken from the tail, thus proceed: bend back the tail to the loins, and divide the skin four inches from the anus, where there is no hair, laying some flat weighty body upon it, tying it up afterwards. If from the viscera you would remove blood, in the groins on the right and left side on each thigh you find the vein, and after removal of the blood put some chalk upon it. If the hocks or haunches are affected, draw the blood from the hocks: the same vein runs down the inside as comes from the viscera. It must be done cautiously, on account of the nerves and tendons; afterwards bandage it up.

The following chapter respecting firing is truly curious, and points out to us satisfactorily the date of its commencement.

Chap. 28. In the cure of animals, authors tell us there are two remedies, the lessening the mass of blood by which morbid constriction is relaxed; and burning by the cauterly, by which the relaxed are constricted. But, although the utility of bleeding is most evident, the use of firing, *it being a very new mode of cure*, remains to be laid open; for firing binds up parts relaxed, attenuates the inflated, dries up the moist, dissolves coagulations, cuts fleshy tumors, relieves old pains or aches, recalls to their natural state parts disordered, removes unnatural excrescences, and removed and scorched, prevents their return: for if you with the red-hot iron sear through the skin, the disease is concocted, matured, and dissolved by the benefit of the fire, and runs out with the humour through the openings made by the cauterly. After the cicatrices are healed, stronger and tighter is the part rendered, and the skin becomes almost indissoluble. But it should be known that a cauterly made of copper is more effectual than an iron one. If the disorder be in the head, let the neck be burnt; if in the kidneys, the loins. Sometimes punctures or points are made, sometimes lines, and at other times like a feather, or fingered: and in this is the skill of the veterinarian known—that he cures the animal without disfiguring him; according also to the parts in which the disease resides, or according to the nature of the skin, the cauterly is used more deeply or leniently. It is, however, to be recollected, that parts luxated or removed from their proper places are not to be fired; but it is well, after they have been reduced to their situations, and strengthened by bandages and corroborant plasters, to use the fire in the hope of a lasting cure: and, above all, the veterinarian is to be warned not to be in a hurry to cauterize; but, after bleeding, drinks, ointments, injections, and other medicines, have been tried and failed, that he should resort to the firing.*

* Vegetius originally designed to end his first book with this chapter, but, as he himself states, is induced to continue it farther, for the sake of inserting all that is most important in his first book, as he observes, it will

Chap. 29. *On the nature and cure of fevers.* Whatever diseases are of most danger, and are obscure and most difficult of cure, I insert in this first book, that they may be the more easily found, and may occur without giving the reader much trouble. 1st, therefore, of the cure of animals attacked with fever; for it is supposed they cannot sustain the heat which accompanies it more than three days, within which time, if they are not relieved, they die. It behoves us, therefore, to give the causes and signs of this complaint, and afterwards the medicines. In fever the head is held low, almost to the ground, the eyes will be closed, the lips hanging down; miserable sadness and heaviness of the whole body follows; the testicles enlarged, hang down relaxed; the limbs glow with heat; the veins beat with more violence; the breathing is quicker and hot; frequent, soft cough; his pace vacillating; no appetite; great thirst; he is watchful, and without sleep. The cause of this is from too much labor and neglect afterwards; sometimes, also, from being over-heated, or much cold, or bad food, or sudden chills after sweating, or from heated new barley. The following is the customary cure: take blood without delay from the face, the temples, or the palate; he must abstain almost entirely from food the first day; he must be presented with the very best hay or softest green herb, little by little; he must rest from all work, and be put aside during a seasonable time, and be led about with walking exercise, and to remain in some warm stable well covered. When he begins to be better, let him have grass cut small: if this cannot be had, barley softened by maceration, bruised, with the husks taken from it, in the manner of ptisan or gruel; a small quantity at a time, and very often.

Thus we see that this ancient writer of nearly two thousand years ago, has described the symptoms of this prevailing complaint of the horse with as much accuracy as any of our modern farriery-books. If he had substituted pneumonic inflammation, or visceral inflammation, for the ambiguous term *fever*, there would not be much to alter or improve; or if he had written symptoms of the fever which attends visceral inflammation, it would have been still more explicit, perhaps. This excellent description of the symptoms or indications of visceral attack of inflammation is copied from the Greek veterinarians, Absyrtus chiefly; so that Vegetius has, I think, been too severe on this author, in the remark we have formerly quoted. Absyrtus adds to the treatment, very judiciously I think, "that his hay be sprinkled with water." Indeed these early Byzantine veterinarians appear not to have been unworthy the trust reposed in them, in the care of their army horses.

A Roman horse rubbed over with blood, oil, and vinegar, must have been a singular sight; yet such a practice is not altogether indefensible; the oil and vinegar, and friction, would no doubt excite the circulation of the skin powerfully, and with the warm coating of the glutinous blood, form an artificial covering for him that would keep up the warmth, and not readily transmit the heat, and that both together would not in a slight degree tend to relieve internal attacks of inflammation, but the appearance certainly must have been most uncouth. They had very few foot cases to trouble them, the great bane and opprobrium of modern practice. The term *mulo medicina* was applied by the Romans to this art, no doubt to avoid the harsher term

will be more read; and certainly turning over manuscripts must have been more troublesome than our present printed books, which would justify his remark. This I mention because Schneider, a German, in his Leipsic edition, has divided this book into two books, and so has thrown the whole work into confusion.

equi medicina, or *equina medicina*, as being too inharmonious for use. The French are puzzled at this day, in the idiom of their language, to use the word veterinarian for a practitioner of horse medicine, and resort to the term *medecin veterinaire* when applied personally; and in the modern Italian by *veterino* is signified, the ostler or stable boy, rather than the veterinary surgeon.

Vegetius seems to have apprehended that inflammation in summer was different to inflammation in winter, and, therefore, has his fevers in summer, his fevers of autumn, and his fevers of winter. Sometimes they ordered their drink to be given through the left nostril, in which there was intended a sort of charm.

There seems nothing particularly worth our notice in the succeeding chapters till we arrive at the fortieth, which is on the abdominal diseases, and where he describes the *aqualiculus*, as he calls it, or stomach, and its offices, with great truth.

In Chap. 41 he more explicitly describes the gripes, which the Greeks called *Emphragma* and *Chordapsos*, which he says was very frequently fatal with them. He seems to have made two or three diseases of it, whether it originated in the stomach, colon, the longanion, or rectum, or the ilium, which is obscure; as also that their names for the bowels were not the same as ours at this day. Having, however, myself formerly written an express essay on this complaint in which their treatment is mentioned, I forbear to say any more of it here. Chap. 43: This disorder is again treated of under another Greek name *Strophos*, and he recommends puncturing the abdomen, but not the intestines, to let out the air generated!

Chap. 44. *Of worms, bots, tape-worms, and lice.* The bots adhering to the anus he thus describes: *Invenitur humor in ano fabæ coctæ similis*, a humor like a bean that has been boiled, sticking in the anus which is no other than the *hæmorrhoidal bot*; for a particular account of which, and its whole family, I must refer the reader to an essay published a few years since in the Linnean Society's Transactions, vol. 3, and afterwards separately, where several species are described, with their amusing and curious history, and mode of propagation. He makes the same remark as our noble poet, Shakespeare,—that the empty stomach and hungry, starved horse is most teased by the bots: *Jejuna animalia ex hac necessitate vehementius torquentur; nam cum his deest cibus magis vitalia consumuntur a vermibus.* He recommends green and bitter oils for their cure with the pontic wormwood; also, nitre and castor will destroy them, he says; and in the next chapter, 45th, he recommends attacking them by clyster; using oil, sharp vinegar, and bitter herbs, especially stating that the horse should be placed on a declivity when receiving the clyster. At the conclusion of this book, among other bitter medicaments, he recommends the *aloe epaticum*, the first or second mention of it in his book, which would seem to show that they were not then acquainted with its invaluable purgative qualities to this animal.

Chap. 46. He treats of *intestinal mucous balls*; recommends their being sought for by the hand introduced into the rectum. He farther speaks of removing them, by a sharp instrument, and afterwards healing the wound, into the bladder, as he apprehends, confounding these concretions with real bladder calculi, with which they have no correspondence: we have called them for distinction *Enterocalli*.

Chap. 47. He returns again to *emphragma*, or gripes, from collections in the rectum, recommending clysters, and their removal.—Chap. 48, 49, and 50. The same.—Chap. 51. *Suppression of urine*, often imagined, but is a truly rare disease with horses.—Chap. 52. Collections of worms in the rectum and bots.—Chap. 53. *De syncopatis et confixis*; animals, perhaps, that have become stiff in their limbs and muscles, through cold and exposure. Cure: Anointing all over with wine and oil, and long continued friction, a warm stable, and a soft bed: drinks of myrrh, tragacanth, saffron, melilot, anagallicum, male frankincense, mixed in warm water, honey, and the rose oil.—Chap. 54. *On nasal hæmorrhage.* Cure: Green coriander juice,

or of the herb *porrum* injected into the nostrils.—Chap. 55. *On redundant blood, or plethora.* Care: Abstinence both of meat and drink, a soft bed to induce sleep, bleeding from the plat-vein, and a drink of coriander, porrum, trixago, centaury, and nitre.

Having finished with their most fatal and difficult disorders, he proceeds very judiciously to the preservation of their health; for it is better, he observes in this excellent chapter, by diligence and study, to maintain the health we have, than to be employed in bestowing medicine on the sick.

Chap. 56. *On the industry and care necessary to maintain animals in health.* The stable, therefore, should be well placed within reach of the master's frequent visits; and, to keep their feet in good order, the floors should not be of soft wood, but of the hardest oak, and well compacted together, for this kind of wood will render their hoofs as hard as stones.* A trench, also, with a drain, should be formed for carrying off the urine. Their manger should be kept clean, and free from all kind of hurtful filth, and every one be well separated and distinct from the other, that the visits of more eager horses may be thus prevented: the racks, also, not placed so high as painfully to stretch their necks, nor so low as to strike them with their heads or eyes. Light, also, should be plentiful in a stable, lest, on going out, the sun should be too powerful for them, and injure their eyes. In respect to heat, in summer, both by night and day, they should be in open airy places; in winter the warmth should be moderate; for too much heat, while it contributes indeed to fatness and good appearance, is very hurtful to nature, and produces disease; and if they are then exposed to sudden cold, they immediately experience illness from not being accustomed to it.

Care is especially to be taken that the hay, the straw, or the clover, be untainted, sweet smelling, and clean; and the barley, also, not powdery or with stones intermixed or gluey, fermented or spoiled by long keeping, but fresh from the granary, and bright by its newness. The water transparent and cold; also, constantly and liberally to be bestowed from a flowing spring, for such cannot easily be contaminated. Twice a day they should be well groomed and rubbed all over by several hands; and custom teaches us that it relaxes and supple the skin, and leads to fatness and good condition. The barley should be given not once nor yet twice, but by several small portions in the day, for so they will digest it better; for, if they take a large quantity at once, they often transmit it, whole and undigested, with their dung. Near the stable should be a dry place, strewed with soft straw and dung, where the animals may roll themselves before they are fed, which sort of exercise contributes to health, and exhibits any invading sickness; for the animal in this case will not roll with his accustomed vivacity, and should be immediately separated for treatment; and to which end it much contributes if the animals be permitted often to lie down and be quiet for short periods. The want of skill in the groom or superintendant, and their frequently entering the stable, disturbs and debilitates them; and the wretched ways of servants, and their impatience with them; and, in the absence of their master, they will violently ride the horses, and not only whip, but spur them also, riding for wagers with one another, and contending in the most vehement manner, nor restraining their horses; and, if injury arise to the owner, it is only subject of merriment and congratulation, which to prevent should be punished with the greatest severity, and men of moderate habits and good experience should alone be employed to handle them. After sweating, if it be summer, sour wine may be used to wash their mouths; if in winter, brine. Also, wine and oil should be poured with a horn down their throats, in summer cold, in winter warmed; three ounces of oil to a sextarium (gill) of wine in winter, in summer two only. Nor should we cease our solicitude, but give the following drinks, which soon remove any languor, evacuation, cough, or internal suffering:—Sulphur vivum, myrrh, raw eggs, with half a pint of the very best wine. Another more expensive drink for all complaints, old coughs,

* The reader need scarcely be reminded, that, as they did not shoe, this was necessary to smooth and harden their hoofs.

consumptive, broken winded, or other concealed affection;—Ptisan, linseed, fœnugreek, saffron, pickle of fat pork, or if wanting, a boiled goat's head and feet and leaf of the intestines; hyssop, german shells, scallions, figs, rue, and green bay berries; long grasses, garlic, goat's suet, pennyroyal; these boiled together till the flesh leaves the bones, continually supplying fresh water to prevent its burning. After carefully straining it, add gum dragon and dried raisins to each drink, with six eggs on the second day; rose oil and butter on the third; *anagallicum*, starch, and the quadrigarian powder and bean flower; give it to the animal fasting, with walking exercise after; and till the seventh day he must abstain from meat and drink!

This, strange as it may appear, was no doubt their frequent practice early in the attacks of disease. The remainder of the chapter, which is very long, is much of the same complexion, and is hardly worth transcribing. After disease, he enters upon those important parts, the feet; giving directions for preventing their breaking, and wearing away too fast, and they relied on the following singular composition, as useful in this respect: *garlic, rue, allium, old axle-grease, and ass's dung, boiled together*, and applied in an evening after the day's journey; another compound was, *tar, wormwood, stale oil, sharp vinegar, mixed and boiled together*.

Also, in this curious chapter, which informs us of their general stable-management, occurs directions respecting the legs, strictly ordering that the pencil of hair at the back of the fetlock be not on any account removed, observing very justly its natural beauty. Of the management of the mane, also, he speaks extensively, remarking "that it is customary to crop it, or cut it off. Many (he observes,) for coach and even saddle-horses, cut it off close, which will make it grow thicker, but to a noble horse such cutting is truly a deformity." Others cut it so as to imitate an arch; and some, after the manner of the Armenians, leave alternate locks of hair; but more graceful, he says, is the Persian method lately introduced, taking away all the left side of the mane very curiously, and leaving the right entire and untouched. And it is extraordinary, he observes, that they should adopt the very plan that Virgil had proposed: *Densa juba et dextro jactata recumbit in armo*. Virgil however, I apprehend, merely meant that this naturally beautiful part should be combed out to the right side, but not cut away as he describes the Persians to do, from the left side.

Chap. 57. *A drink for summer use*. Saffron steeped in old wine, tragacanth dissolved in warm water, with the herbs, porrum, apium, portulaca, and goat's milk, eggs, rose oil, honey, and raisins, pounded together, to be given for three days successively." He recommends, however, half a pint of fresh cold water to be given after it, and very appropriately we believe.

Chap. 58. *A winter drink*. Old wine, oil, pepper, rice, cerefolium, tragacanth, fennel-seeds, bay berries, honey, eggs, and raisins.

Chap. 59. *A drink for autumn and spring*. Costus, cassia fistula, celtica, petroselinum, betony, liquorice, sagapenum, spica indica, saxifrage, eupatorium, melilot, illyrian iris, centaury, gentian, aristolochia, anonium, scinoanthos, asarum, aloes, myrrh, opopanax, dragon-root, saffron, castor, pontic wormwood, digested with the very best wine.

Chap. 60. *A drink for all Seasons*. Very much as the former.

Chap. 61. *On difficulty in staling*. The following is a ready remedy for the use of the traveller. Mix

the earth on which a horse has staled with wine, and, straining it, pour it through the nostrils; so shall it immediately provoke urine.* Also, a head of garlic inserted into the anus or within the sheath. Also, powdered frankincense, mixed with an egg and wine. Also, a decoction of beet-root and mallows. Also, a live bug or fly put into his ear. Also, a most certain remedy is to use friction above the external opening of the urethra.

Chap. 62. *On gripes.* Seeds of rue, well pounded, with hot wine. Also, decoction of beet-root, or its expressed juice mixed with nitre, to which oil must be added, and be injected, as a clyster. Or, if these cannot be had, honey, with a third part of pounded salt, formed into masses of the size of an egg, must be placed in the rectum, the animal being put in an inclining position. Also, the bone of a snail, which no unclean hand hath touched, or any tooth, or the earth, tied to the navel, will cure them.

Chap. 63. If the horse's back has been hurt by the panniers, or the saddle for want of due stuffing, or a too heavy load, if it be recently done, boil the stalks of onions, or the onions themselves, in water, and apply them hot, and keep them on by a bandage. Also, pounded salt mixed with vinegar, adding to it the yolk of an egg: anoint therewith, and it will dry up the injury.

Chap. 64. *On making the much approved diapente.* Gentian, aristolochia, myrrh, bay-berries, ivory shavings, diligently pounded, and mixed in equal quantities, prepared and kept in readiness, that if the animal on a journey is looking sad, or with a staring coat, or is attacked with any disorder, immediately he is to receive a table spoonful, mixed in a gill of best wine for three days, or even if he be at work, it will restore the internal ailment. It is an approved remedy. To the horse that coughs, give a half pint of raisin wine, and it will cure him.

He then concludes his book with the usual apologies, and stating that in the next he will treat of their distempers from the crown of the head to the sole of the foot. There is, in my opinion, no sort of doubt that it is the proper conclusion of his first book, and not of the second, as Schneider has endeavoured to make it.

His second book I shall not attempt to follow with a translation, as what I have already extracted from this writer will sufficiently show the state of the art and the prevailing opinions of those days, and the last improvements of the art among the ancients. His preface to the second book is, however, interesting, and worthy our consideration. He tells us the art had very much declined in his days, from the small encouragement given, and profits attached to it: and that many, following the example of the Huns and other barbarous nations, to avoid expences, were used to turn out their animals into the pastures during the winter, and give them up entirely to chance, which, he observed, profited few and injured numbers; since the finer breeds of the Roman horses could not endure the hardships of these horses of the barbarians; and he concludes with the reasonable observation that vile indeed must be the horse that is not worth the pittance of his medicine, or if one is lost, would it not by its price have paid for the cure of a great many sick ones?

The ancients seem not to have had any regular purgative for the horse: the roots of the wild cucumber seem to have been the chief article they employed with this view,

* This, though a filthy remedy, is surpassed by our modern blacksmith physicians, who administer not only human urine, but human ordure, as a medicine to this patient animal.

and lettuces, and what they called *cauliculi*, probably a plant of the cabbage kind, was another laxative with them. Vegetius directs them to be given with kitchen grease, (*liquamine*.) Also, a plant they called *asininus* they employed along with the wild cucumber; and in a green state, cut fine and boiled in oil: one may suppose, from their accounts, it took some time to operate. They also used with this view, honey, white hellebore, and scammony, given in white wine. In order to force a perspiration, he not only orders a warm stove, but also the use of a hot dunghill, the horse being covered over perhaps in it, a useful hint possibly to our modern practitioners.

The ancients do not appear to have understood the use of blisters like ours, of cantharides, for horses, but they amply supplied their place by the use of the cautery.

Vegetius, through this second book, tenaciously adheres to the plan he had laid down of beginning at the top of the head, and going regularly to the feet, which serves as a sort of index in looking for the disorders; so we have the pole evil and the diseases affecting the brain, the eyes and the throat in succession, and then those of the neck, shoulders, arms, knees, hips, hocks, swelled legs, mallenders, the *podagra* or gout, founder, hoof abscess, bruised and abraded feet, tender, bruised, and gathered heels, that is, of the intertortional point of the sole. *On casting or losing the hoof. On worn feet and soft-footed horses.* He passes, however, afterwards to the injuries of the back, which is a slight departure from his proposed arrangement, and which he treated of in his former book; and then concludes with the art of making the hair grow on bald parts, and on making white hairs black, and black hairs white. Such are the contents of his second book.

The preface to his third book does credit to him as a man of feeling in describing the invaluable services of these beneficial creatures; he observes, that, in composing his book, he has yielded to the honest desires of servants, collecting from all authors, and compiling it in language that he hoped the scholar might not despise, and the simple herdsman be able to understand; but, above all, his incitement to write was, the utility and excellence of these animals, without which the earth could not be tilled, or the human race be supported, the vineyards would lie idle wastes, the plough become useless, and waggons inert machines, and every thing heavy would become immoveable but for their labors. He also informs us that the cattle were protected in the Roman government by severe laws, to prevent their being abused, and that it was death by their statutes to ill-treat them. Columella, I observe, has devoted forty-five pages to the ox, thirteen only to the horse, and six to the mule; so that we may apprehend the degree of estimation in which they were held by this difference of attention. These ancients also believed that justice had fled from the earth, indignant at witnessing the unjust and cruel treatment of these most worthy creatures, and so the ox became a

constellation, and was placed "*inter fulgentissima sidera, particeps cæli,*" amongst "the brightest of the stars, an associate of heaven."

This third book is on cattle chiefly, and is the most corrupted of any, and by collating it with Columella, near a hundred useful corrections can be made in it, as it is very much taken from him. In the 18th Chapter, the singular expression of "*glante ferreo*" occurs, which would almost lead one to believe he alluded to an iron shoe; though the expression is no where else to be found; and he adds, "*vel si defuerit sparteæ calceabis, cui lemniscos subjicies.*" These *lemnisci* were probably a flat plate of metal or wood or leather, attached to the broom-twig socks by ties. If, however, nail-shoeing had been known, a writer so exact could not have passed it over in silence; nor could they have gone upon their flat causeways in iron shoes, for their causeways more resembled our flag-paving than our present roads.*

In Chapter 24, he has well described the lock-jaw (as we call it) of these animals, under the better title of *morbis roborosus*, or *oaken distemper*; since the muscles in this complaint, not only of the jaws, but of the whole body, become rigid and hard as wood. It occurs, I have remarked, much more frequently in the northern countries of Europe than in the southern, and very often kills. From what I have observed, it is not by the constriction that the animal dies, but by the inflammation of the lungs, the blood being driven apparently by the constriction upon the interior; bleeding copiously and sweating ointments, seem to cure it best, as far as my experience has gone. Powerful friction, with hot ointments, the ancients very judiciously recommend; and Vegetius quotes the practice of some who employed very hot air to surround them with, or hot sea or river sand, leaving the head and nose only out, till they thoroughly sweated them. Oil and wine mixed, and well rubbed against the hair, he states, and with truth I believe, to be excellent.

The rest of the chapters I am obliged to pass over in silence, with some interesting matter there is also a good deal of repetition of what occurs in the preceding books; and pass to the fourth and last book; nor can I concur with those who have considered this fourth book spurious, though inferior to the others, there are marks enough, I think, of its being the production of Vegetius, and especially the preface.

In this fourth book Vegetius has attempted, perhaps for the first time it ever was attempted, the anatomy of the horse; and like a first sketch it is bad enough. It consists in little else than numbering the bones, and telling us there are one hundred and seventy bones composing the body of the horse—so simple are first beginnings of human knowledge in the arts.

* An ample dissertation, on the knowledge of the ancients in this respect, may be consulted at the conclusion of my Work on the Foot; and other particulars again in the Stereoplea.

He then measures the length of the various parts of a middle-sized horse ; but it is unintelligible. Next he speaks of the quality and number of the tendons (*nervorum*), which is the most defective of all. He then enumerates all the external veins, with tolerable accuracy. He next adverts to the signs by which the age is ascertained, which is borrowed from Columella, but is not equally clear ; for he who writes from an actual observation of nature, almost always renders things clearer than he who copies only. He has attempted, however, a novelty in giving the black markings of the teeth which succeed the cavities, which do indeed afford an indifferently good means of judging of the age, after the ordinary marks or the cavities are gone. He then speaks of his own travels and experience : “ *Quæ res nos compulit, qui per tam diversas et longinquas perigrinationes equorum genera universa cognovimus et in nostris stabulis sæpe nutritivimus ;*” which thing compels me, who have travelled into many and far countries, and have known every kind of horse, and have kept many in my own stables, &c.” But the most interesting part of this book is an account of the various races or breeds of horses then in estimation in Rome, and their characteristic make and qualities.

The horses of Rome he divides into three classes : for war—the circus—and the saddle. For *war*, he observes, the *Huns*, *Turingian*, *Burgundian*, and *Frigiscian* horses excel. Next, the *Epirotic*, *Samaritan*, and *Dalmatian*. For chariots, the *Cappadocian*.

In the *circus* the *Spanish* horse excels all others, and also the *Sicilian* ; although the *African* horses of Spanish blood are the swiftest of any.

For the *saddle*, above all, the *Persian* horses ; being the easiest in carriage and most soft in their step : afterwards come the *Armenian*, and *Sappharenean* ; nor should the *Epirotian* or *Sicilian* horses be despised, though not equal to them in their deportment, manner, and form.

“ The horse of the *Huns* is known from the other breeds by the great curving outwards of the front of the head : eyes prominent, small nostrils, broad jaws, and stiff neck ; mane reaching to the knees, ribs wide standing out, back hollow, tail with copious long and curly hairs ; shanks stout, fetlocks small, hoof large and spreading, flanks hollow ; body angular, with projecting points of bone ; no furrow or channel in the buttock, no knots or rounded swellings or fulness of the muscles ; length exceeding the height ; belly, when empty, and the horse is out of condition, hanging low ; bones everywhere large ; an agreeable leanness of appearance, which rather contributes to them a grace than a deformity ; a temper gentle and cautious, patiently enduring the wounds and casualties of war.

“ The *Persian* horses, in stature and fashion, are much the same with the other kinds ;

but the great difference consists in their walking with a grace peculiar to them: their step very short and frequent, which agreeably elevates and delights the rider; nor can it be taught by art, but appears to be the pure gift of nature. They are between the *Colatorii** and those vulgarly termed *Totonarii*; † the step being of a middle kind, and though unlike either, they are believed to have something in common with them both."

"With the Persian horse, it is ascertained that his step is more pleasant in proportion as it is shorter: in long journies their patience is very enduring; their temper is haughty; unless subdued by continual exercise, apt to be vicious and stubborn; nevertheless, they are sensible and intelligent, and, which is surprising, in their impetuosity they do not lose sight of propriety. In their carriage, their neck is curved as a bow, which brings the chin almost to touch the breast. Next he treats of the length of age which different breeds attain to. He then takes a summary retrospect of his labours, and proposes to give what useful prescriptions still remain to be exposed, observing, that the *mulo medicus* of his day was too fond of stuffing his prescriptions with expensive and numerous drugs through a too great desire of profit. For he says, very justly, "*Constat namque, non tam multis neque preciosis speciebus, sed paucis et ad causam.*"

Then follows, what he conceived, a most useful composition for horses—*Chiron's drink for refreshing them*, which will sufficiently satisfy the reader of the gross ignorance that prevailed in those times, and how the feelings of these animals were sported with.

Ptisan or gruel a quarter of a pint, *linseed, saffron, hog's guts* well washed, or a *goat's head*, with the feet and belly; put them into a pipkin with two handfuls of *hyssop, German shells, figs, and rue, laurel berries, dactyls, garlic, goat's suet, and pennyroyal*, to be boiled till the flesh leaves the bones, then strain, and add *tragacanth* swollen by steeping in water, *raisins, eggs, rose oil, butter, anagallicum, starch, bean flour*, to be mixed and given with a drenching horn for three days, then after an interval of seven days to be repeated, in order to keep off distempers! This was their famous *diapente*. It is, indeed, to be suspected, that the very same motives for drenching these poor animals with nonsensical compositions, existed in those times as in the present; *viz.* to gratify the cupidity of those who looked after them; for little or no purpose could such things be of to the animal, but must certainly disgust and

* *Colatorii*, perhaps from the frequent and distinct drops made by a filter, to which their pace was quaintly compared; and hence also, from the same suggestion, they were called by others *Guttonarii*.

† *Totonarii*, perhaps from *Tot*, many or frequent, or as we say, *tot, tot, tot, or dot, dot, dot*; meaning small distinct paces or divisions, or portions of any thing in quick succession of time.

nauseate him. Other prescriptions, equally elegant and efficacious, follow against worms, general disease, and witchcraft; then comes the once famous *quadrigarian* or four-horse powder, also, of the noted Chiron's forming, consisting of *tragacanth*, *aloes*, *myrrh*, *costus*, *animum*, *cassia*, *gentian*, *birthwort*, *centaury*, *betony*, *saxifrage*, *elder*, *opium*, *abrotanum*, *eupatorium*, *cardamum*, *spikenard*, *celtic nard*, *asarum*, *carrot*, *castor*, *opopanax*, *galbanum*, *strutium*, *panacis roots*, *liquorice*, *wormwood*, *peristerium juice*: these pounded together, to be kept in a glass or earthen vessel for use. This prescription I have given in order to exhibit a large portion of the antient artillery of their pharmacopœia. Other prescriptions follow these, equally elaborate, and formed still of other articles, so that nearly all the known products of the earth were in use for medicine in these times, jumbled together. *Compositio caustici*, cap. xvi.; also of Chiron, similar to our strengthening plasters, or, more vulgarly, a charge, of *Jew's pitch*, *galbanum*, &c. I merely introduce it to show in what a very different sense the word *causticum* was used by them. Under the term *malagma*, is given also the ingredients for a strengthening plaster, as we call it. And under *Collyrii fistularis*, a composition for old fistulous ulcers, our *Ægyptiacum* is seen, formed chiefly of metallic oxyds, *copper*, *vinegar*, and *honey*. Under the term *Syncrisma* is found their digestive ointment; and a drying ointment occurs under the term *Traumaticum*. And after are seen the *Collyria*, or eye-washes of *Absyrtus*, *Pelagonius*, and *Chiron*, of *burnt nuts pulverised*, *manna*, and *honey*; or, *pepper*, *honey*, and *saffron*, and *powdered cuttle fish*. Numerous uninteresting prescriptions succeed these, and conclude the work, which cannot profit us much, but must ever be valuable, as a curiosity, in preserving to us so large a mass of their opinions and modes of treating these useful animals at this early period.

It seems singular, that the Grease of horses, so common a complaint with us, is nowhere described in Vegetius; it is, indeed, much less common on the continent than it is with us in England, where its occurrence is very frequent, especially about the fifth year of the horse's age, and in the autumn more particularly. If at this time he is fed rather high, and is exposed to dirty roads, and to have his feet and legs wetted, and not carefully rubbed dry afterwards, he will be almost sure of it. The French have no better name for it than *caux des jambes*, or watery legs, nearly synonymous to dropsy. The Greeks, however, from whom Vegetius compiled, have sufficiently made mention of it under the terms, *ρευματοσ εν ποσιμ*, *Σειρασ*, and by Absyrtus, *χειροματοσ*; and informs us the Romans called it *Suffragines*, *suffrago* being the *fetlock* of the horse. There is no doubt this secretion is of a specifically poisonous nature, and the progenitor of the vaccine, if not by some modification, of the small pox; the one preventing the access of the other, proves sufficiently their relationship and

analogy. I may also remark of this singular disease, the Grease, that it is allied to Farcy, and I have seen it alternate with it, one appearing as the other was suppressed; so that it may be one of the forms of this Proteus-like disease of farcy. Its cure appears to consist in keeping the parts clean and warm; and, in the first stage, with bleeding, purging, and emollients; afterwards aromatics and tonics internally, and astringents topically, assiduously and carefully applied, to reach the very bottom of the chaps.

PART II.—*The Progress of Horse Knowledge, from the Decay of the Roman Empire to the present time.*

AFTER Vegetius, who lived in the fourth century, there followed a period of darkness of more than a thousand years, and of loss to mankind in respect to scientific advancement; consumed in wars of the more barbarous northern nations against the more luxurious inhabitants of the south, overturning their settled habits of idolatry and government, and opening, as it appears, a way for the growth of Christianity; but soon were misapplied its mild and humane dictates, and they endeavoured, by unlawful means, and force of arms, to carry on its benign principles: and in this error commenced the bloody wars of the Crusades, which occupied nearly the whole of this long period, under the pretence of driving infidels from the *holy land*. Had they possessed the reflection and religious knowledge of our immortal bard, they would have saved themselves all this waste of blood and treasure; who has observed—

“————— that God attributes to place
No sanctity; if none be thither brought
By men who there frequent, or therein dwell.”

MILTON, xi. 836.

We may remark, that it was during this long period of the obscuration of knowledge, and at an uncertain date, that the present art of nailing iron round the feet of horses for their protection, was discovered: at first it was done occasionally only, and afterwards permanently; and this practice at length became general throughout Europe; and it

appears to have been brought into this country about the time of William the Conqueror, if not by himself. The protection it afforded was only attended to, nor was the slow mischief of its effects perceived till lately, or understood at least; bringing to the horse more sufferings than all his other cruelties and wrongs put together.*

During this period of darkness also, the Veterinary Art ceased to exist as a profession, or was so feebly practised, that, on the discovery of the art of shoeing, what knowledge remained of it was easily transferred to the working smiths, who, it is probable, alone could be found to engage in the practice of this art. Its sister science, human surgery, (it can hardly now be credited,) underwent a similar fate; and, for the want of schools to teach, and professors to practice, passed into the hands of the barbers, from whom it has not been entirely removed till within the last century. These smiths, under the name of farriers, became from habit and the custom of mankind, in seeing them so employed, as it were, the legitimate sons of Veterinary science: their labours, through a long period of years, have not advanced the science a single step; but they were necessarily employed when there were no others to practise it, as being more likely to be skilled in these matters than those less deeply engaged in them; though it would be seen on reflection that the good practice of medicine, even on brutes, would require as much the knowledge of anatomy and of the principles of medicine, as the same practice in the human being. Now, the word *farriery*, we may observe, universally employed in this country to signify not only shoeing, but the whole Veterinary Art, is a corrupted and barbarous mode of spelling the word *ferriery*, as it is immediately derived from *ferrer*, French, to shoe a horse; and *ferrum*, Latin, iron; and should signify no more than what the word implies—the practice of making and applying the iron shoe to the horse's foot. And in altering the mode of spelling this word, which we propose to do, we commit no violence on the language, as the most ancient English authors did so spell it.

After Europe became more settled, the revival, as it is called, of letters and learning took place about three or four centuries ago, and the art of printing was used, there came also along with it a more true basis for the repose of knowledge, or mode of enquiry and reasoning; this was by a sedulous attention to facts, phenomena, and experiment, and a closer reasoning deduced from them; instead of the syllogisms, sophistry, and wild opinions of the schools, embarrassing and fettering human sense. And this principle established, has brought about and secured a lasting dominion and triumph over darkness and error; and, in pursuing which, we are now daily reaping the most beneficial effects.

* See proof of this in my Dissertation on the Foot and Shoeing, where it is demonstrated by actual experiment. 4to. 1809.

In Italy appears to have began this revival of letters; and here, also, commenced the first solid work on this art, and which, though roughly executed, deserves great praise: it was *The Anatomy of the Horse*, by Ruini. It is followed, also, by *the Diseases of the Horse*, in six small books, the whole clearly arranged, and with coarse wood-cuts.* It surpassed any thing we had in this country, I believe, till Stubbs' work appeared.

Of this date and period also were the learned works of Conrad Gesner,† and of Aldrovandus,‡ replete with learning and quotations from the ancients, where this animal is mentioned in any way, arranged in methodical order under different heads, which must have cost no small labour of research. It is true, these writers did not exclusively consider his shoeing or his diseases and medicines, which is chiefly our aim; but they mixed these incidentally with their materials, and viewed him only as an individual among the whole race of quadrupeds, which, as natural historians, they professed to treat of; on account, however, of his high value, they considered him more largely and attentively than any other of this order of animals.

A work also appeared in France about this time, of a singular character, written also in the Latin language, by Laurentius Rusius, as it would appear from the preface of it, put into this dress by a Monk, the prior of a convent near Bondi. It is a work far from contemptible, but disfigured in its commencement by plates of uncouth bits for horses' mouths—the fashion of those times, and detestable enough. The latinity is very coarse, but it has some good remarks for this period, in treating diseases,§ and it must have been the best work of its day, though the remedies and operations are often uncouth and cruel. The use of aloes, as a purgative, is not mentioned in it; indeed, the exact period and circumstances of the introduction of this medicine, I am at present unacquainted with, but suspect it to be of comparatively modern date. In Chapter 25, on purgatives, he recommends grass, entrails of fish, the tench or barbel, gourds, and melons also, for this purpose, after Chiron. A long tedious chapter on generation is seen, in which he seems to say, that after ten years they are useless for this purpose! He does not appear to know the age of the horse by the teeth, beyond seven years; and it would be waste of time to go into any criticisms or notice of the particular parts of it. The last chapter (the 181st) curiously concludes with the parts of the horse that correspond to every sign of the Zodiac; as Aries, the head; Taurus, the neck, &c. This work may be considered as

* Carlo Ruini, *Anatomia del Cavallo*; folio. Venet. 1599.

† Conrad Gesner, *Liber de Quadrupedibus*; folio. Tiguri, 1551.

‡ Ulysses Aldrovandus; folio. Bononia, 1599.

§ Laurentii Rusii *Hippiatria sive Marescallia*. Paris, 1531.

holding a middle place between the ancients and moderns. The terms used in this work for the diseases, have a striking resemblance to the names used for these complaints in modern English, only they are formed here into doggrel Latin, which would seem to show that our horse phraseology was much derived from the old French of this period, and singular it is that modern French resembles it less than our English.

Four years after the publication of Laurence Ruse, Ruellius published his learned work, the extracts from the Greek Veterinary MS.S., which, though sometimes quoted by the author we have next to consider, yet lay, for the most part, it is probable, in the closets of the learned, little known or understood by the occupiers of this profession of horse medicine. So far our history has depended upon the labors of the continental nations of Europe, we now pass to the productions of our own island.

The first work that appeared in England worth noticing, was published in the year 1609, in the reign of Queen Elizabeth, printed in small quarto, and black letter, it is entitled, *The four chiefest offices belonging to Horsemanship: that is to say, The office of the breeder, of the rider, of the keeper, and of the ferrer. By Master Blundevill, of Newton Flotman, in Norfolke.**

Blundeville seems to have been a man of some learning, and his work is not in that conceited and knowing way which his successors of the next age fell into; he has, however, fallen into great mistakes in his first book in quoting the ancients, calling the Persian horses, Parthian; and the Hunnish horses, Hungarian, † &c.

In his second book, he gives us figures of a multitude of horrid irons for torturing Horses' mouths, the rage of his day, where violence and cruelty supplied the place of sense and science; yet he seems aware of their folly, for, in concluding, he says "*The true art of riding shall not need the help of so many bits, but only of these three, that is, the canon, the scatch, and the whole port with smooth melons, or with olives; which three bits, with art, doth suffice to frame any horse's mouth, of what sort so ever he be.*" His third book is on *dieting* Horses, and contains also the nonsensical jargon of the day respecting the temperaments, as entertained perhaps, by the physicians in those times. On *dieting* Horses, he seems to favor the opinion of a hearty feed at night and plenty of water, and but little during the day. In this book also, he directs that the Horse-shoe should be made thin and straight on the sides, and surely a more mischievous direction could not be well devised for ruining the foot; as any authority, therefore, in the matter of shoeing, he will scarcely be considered.

* The very first and oldest English work on this subject is, "The Propertyts and Medycines for an Horse," 4to., printed by Wynkin de Worde, about the year 1500. This work not having fallen under my notice, and being more limited in its matter perhaps than the above, would not be so proper an object for remark.

† Perhaps from strangely apprehending that the Huns were a people of Hungary.

His next or 4th book is, on Curing of Horses and Shoeing them; for his plans of cure he often refers to the ancient writers and to Laurence Ruse, but most often and with apparently more steadfast faith, to his old friend Martin Ghelly, as he says, commonly called Martin Alman: on one occasion and one only, is to be found the aloes prescribed, to the extent of an ounce for a dose, and as a purgative; yet his general directions in this respect, are after Laurence Ruse; and in one place for a purge, he recommends a quart of decoction of mallows with a pint of oil or like quantity of fresh butter. He seems to have been more of an amateur in these matters than a practitioner, and was but little acquainted practically with horses' diseases; he seems to mistake glanders for an affection of the tonsils, and strangles for the same as *angina* or *quinsie*, of the human. He makes the ancients, in many places, say things I do not find in them, and Laurentius Russius he constantly quotes under the name of Russius, as though he really had not seen the original work: it is indeed scarce; the only copy I know of it in this country, I purchased from a book-stall several years ago in Tottenham-court Road, for eighteen-pence, which has served for the above observations. He describes the diseases of the gall, that is, of the gall bladder, though he honestly remarks none of his predecessors had done so, p. 38, ch. 88. He, therefore, from inattention, first propagated this error; the horse, remarkably, having no proper gall bladder. He also recommends the ignorant and dangerous practice of opening the synovial galls of the hocks and fetlocks from hard work, called wind galls and thorough pins, which must have been fatal to most so operated on, from the excessive irritation which the exposure of these cavities to the air always occasions.

The word *frog* does not occur in this book, but *frush* is constantly used for it, and when discharging, *running frush*. His practice for this complaint was most mischievous, "to cut away all the horn so as to make it raw," and then apply salt and the white of egg! He has a long chapter *on purgatives*, but treats of them in a very evasive manner, *aloes* is certainly spoken of with the rest, but not prominently, that they evidently were in great uncertainty about it at this period, and of diuretics they say nothing. The term *horseleachcraft*, supplied in these days the place of our modern word *farriery*. The word *coffin* occurs, for the entire wall of the hoof, and hence the included bone came to be called with us the *coffin-bone*, a name it still retains, though the hoof no longer receives that appellation. In shoeing, his directions are very wretched; among other blunders he orders the two nails next the heels to be first driven! None of the shoes represented by him are fullered, that is, grooved round the rim for the nails, and the holes for the nails of his shoes are carried round the toe. And though he recommends in his second book, a shoe made thin and straight on the sides, yet in his plates of shoes, there is not one of this figure.

He has also given a shoe with a lap-joint, riveted by a small iron pin, in case of a lost shoe, and to accommodate different feet, and recommends gentlemen learning to nail a shoe on, in order to use it, observing that in Germany it was the practice so to do, with those who were very fond of riding, so that it was intended merely as a resource, to be removed as soon as a proper shoe or smith could be found; indeed, such a shoe could not be worn many days, if many hours, without coming asunder. No principle of elasticity in the foot being known, it was, in fact, hanging against the walls a mere curiosity.

About fifty years after Blundeville, another work of some learning appeared on this subject, written by *Leonard Mascall*, a small 4to., in black letter, and of the date of 1662. It is entitled *The Government of Cattel, divided into Three Books: the first, of Oxen, Kine, and Calves; the second, Discoursing of the Government of Horses, with approved Medicines against most Diseases; the third, of Sheep, Goats, Hogs, and Dogs, &c.* He seems to have been a better scholar, and better practitioner and writer than Blundeville, and borrows copiously from Columella and the ancients, often adding ale and spices to their prescriptions. The word *frush* is also used for the frog throughout his work.

He seems to have been more conversant with oxen than with horses; for he says "the horse's age is known by his hoofs and tail, and bars in the roof of his mouth, but chiefly by his teeth;" (at p. 106 he says, "of weary beasts against cold, you must give them things to vomit"), so that he entertained a notion that horses could be vomited. In cattle he seems at home, but he falls off much in his remarks and treatment of horses. Moyle with him is often used for mule. The idea of horses having no brains is found with this writer, who has it "and also they say an horse or a moyle hath no brains, but in the place thereof, he hath, as it were, a bladder filled with wind, and no brains therein or other thing, but like a white water!" this absurdity has been fostered till this day, and used as an excuse for cruel treatment.

That shoeing was formerly more practised by servants and others than at present, would appear from this passage: "The carter ought to have knowledge in shoeing his horse, that when any shoe shall loose by the way in travel, he ought to have hammer and nails ready to fasten it on again, by that means he may save his horse oftentimes from surbat,* gravelling, or pricking with some nail, or cut with some stone, or such like: for to have experience in shoeing, is, a thing soon learned, there is small danger; whereupon among all smiths this proverb is said, which is, before behind, and behind before; meaning, the most dangerous nails to drive in the fore-feet are the two hindmost, and in the hindermost feet the two foremost."

* Surbat is perhaps an old French word, from *surbattre*, to bruise by beating upon, or against, the ground.

Page 135, *cantaradice* for cantharides is first mentioned in this writer, but not exactly as a blister, though euphorbium is directed along with it and oil of bays—it was applied as a plaster.

It is hardly likely that one tenth of the wretched practice and absurdities here recommended, ever were actually used, at least it seems reasonable to believe so, yet I fear the contrary may have been deplorably the case.

The word *ball* occurs first in this writer for horses. Blundeville uniformly calls them pills.

The hydatids in sheep this author seems perfectly aware of, and describes them “like grains of oatmeal living in a bag,” which he recommends the extraction of from the hind part of the head. He observes, it is mostly young sheep that have them, of two years or under, p. 224. A German work has lately assumed this discovery.*

The next English author after Mascal, was Gervase Markham, whose work more pretending to knowledge, is, in reality, more absurd than his predecessors; it went through many editions, the eleventh is before me, printed in the year 1675; that the early editions preceded De Grey, the next writer we shall notice, is clear, because in De Grey's preface Markham's name is mentioned.

The title it bears is, *Markham's Maisterpiece revived, &c.* This work was published in the reign of Charles the Second, and in this reign the vaunting and puffing style of writing on these subjects arrived at its height, which appeared very much to have arisen out of the practices of the people of the turf, who with their tributaries and dependants assumed great pride and ascendancy in all that respected the horse, keeping at a distance, and deterring by their conduct, any opposition from the more sober and reflecting part of the world. A jockey, therefore, was conceived a most consummate judge, from whose decisions there was no appeal, and few, indeed, dared to call them in question; this spirit descended from them into all the subordinate orders of stable-servants and coachmen, greatly to the annoyance of the public, and of the horses. It is, however, pleasant to observe, that things have taken a more favorable turn in this respect since I have known them; and I hope, ultimately, we shall see all, striving hand in hand, to make these animals comfortable in their respective labors, duly apportioned them, and mankind blessed in their use, which is, however, far from being the case at present.

In writing on these subjects of Horses, I have rarely found it my duty or province to moralize on their abuses, however much it might seem to call for it, but have generally avoided it. If I could, however, by any suggestion lessen the evils com-

* Von dem drehen der Schafe, by Leske. Duodecimo, Leipsic, 1780.

plained of, I would not from fear of any undeserved reprehension withhold my views upon it, for lamentable it is, to see so many thousands of needy people, for such the great mass are, that frequent these assemblies of the race ground, collected and brought together from their families and homes to spend in dissipation the hard-earned pittance they possess, and the spirit of idleness and gambling which it so often leads into, and of forming associations which serve but to strengthen bad habits. Can we also view, without feeling the agony and distress of the animals, urged beyond all natural bounds for a paltry reward to their owner, and to their great and irremediable injury often, I suggest whether it would not be better, or worth the trial at least, to ascertain the speed of any horse through a given space, of no extreme length, by a stop watch, without these heart-rending contentions; and could not there be a fair trial of strength made, or their powers be ascertained by a direct mechanical means, as contending against a given weight, or a spring of ascertained powers, which trial would not be attended with any ill consequences to the animal. Might not chariot-races be again instituted, where the obedience of the animal and accuracy of performance should be his chief praise, and that of his conductor? Could not also single tasks and trials of great skill and management in the wheeling, turning, from rapid to slow, and *vice versa*, and other difficult movements, and the graceful also, be made the subject of a prize, to the winner, which would show to what perfection of obedience and accuracy of carriage he had brought his animal; and might not handsome premiums for beauty, proportion, and shape, in the breeds of horses useful for particular purposes be made the subject of a prize of value, and thus benefit society, under the decision of twelve men picked and good judges, and save in this way such congregations and such excesses and cruelties, hardly allowable in a Christian country. Schools and premiums for accurate driving and management of the horse are much wanting, and would greatly improve the convenience of our streets and ways, none being permitted to drive, but had passed the school of examination, instead of a whip being put into the hand of every awkward boy who is inclined to take it,—but to return to our authors.

This masterpiece, as it is called, is a very verbose performance, and to enter into a critical examination of its contents, would be a waste of time, both of mine and the readers, I shall therefore content myself with but a brief notice of it, as a specimen of the style of this age. It is divided into two books, the first on cures physical; the second on cures chirological. The first book is divided into 113 chapters, from the first to the twelfth is consumed in the unintelligible jargon of the day, about elements, temperaments, or temperatures, he scarcely seems to know which. With him the word farrier occurs almost as frequently as horseleach instead of ferrer, which points out the date of the commencement of this corruption of our

language. He seems to have dabbled in human physic, for he has brought not only the logic of it but the diseases also, into the stable: as, tertian and quartan agues, diseases unheard of before in books of this sort, and remedies as absurd, making a masterpiece indeed, of confusion. He also introduces after Blundeville, the diseases of the gall-bladder of the horse, which folly continued, I believe, till the days of Taplin, who I understand, in his early editions had the same disease, but some one giving him a hint that the horse had no gall-bladder, it was dropped in the succeeding editions of his work, which like its present prototype, was pushed by the booksellers through an incredible number of editions, to the exclusion of better works. In the 119th chapter is seen, the word *frog* for the first time among English writers, having been called very properly, as we have noticed before, *frush*, being derived from the French word *fourche*, and from the latin *furca*, alluding to its forked base. He seems nearly or quite unacquainted as yet, with aloes as a purgative, and as he makes no mention at all of diuretics, they were unknown at this period.

I have waded through nearly all our old English authors on these subjects, to see if perchance any casual remark or new idea had escaped them to instruct or amuse, but found nothing to reward my trouble. Markham's book seems to have been a prolific source of profit to the booksellers, and with him ended all views of, or reference to, the ancients in books of this sort; after this period, the public were abundantly supplied, and there was no want either of presumptuous title pages to suit the demand, for it was by many apprehended and believed, that from the race-course, would finally proceed the just knowledge of the horse, and therefore books with large pretensions were the more encouraged.

The next production of the English press worthy of any notice, appears to have been in the year 1651, it is however, the second edition, so that it probably was first printed a few years earlier, it is titled *The Compleat Horseman, and Expert Farrier*, by *Thomas De Grey, Esq.* In his address to the reader at the commencement of this compleat work, he says, "*I do then shew thee what means we have to preserve the Horse from all inward diseases, which I do find to be four, viz. by purge, sweat, phlebotomie, and by vomit!*" His rules for breeding colts are more judicious. The wood *heel* applied to the back of the foot of the horse, I think, is first seen in this writer. His book is in the way of dialogue, or question and answer, with very little method or order. He describes with all the other ancient English writers, a disease they called "*mourning of the chine*," an expression of considerable obscurity; it would however appear, that by the word *chine*, the old writers meant the upper arch of the neck, the disease was the glanders in its last stage of inveteracy, when the discharges were supposed to flow from this part!

The horrid and but too common practice in the present day, of cutting away the substance of the frog, and slashing away the duplicature of the inflexion of the hoof, under pretence of opening the heels, is to be found for the first time in this complete work, the following are his words, p. 420, "*you must observe this rule, viz. you must at what time you would have him shod, cause his hoofs to be pared well, and even, and to open the heels and frush well,*" &c. Of a good purgative for the horse they still understood but little, and made up the deficiency as well as they could by employing very much, glysters and suppositories, the latter is now so little known or used that my reader may be almost ready to ask what this may be. It was a solid roll or mass, made of honey, nitre, and wheat flour, mingled with aniseeds, and other things, and placed in the fundament to dissolve, see p. 436, or an onion cut and jagged, was also used as a suppository.

The aloes for a purgative, as his volume proceeds, gets gradually more and more into use, and at last he orders it almost by itself; and even two ounces of soccotrine aloes for a dose, "*keeping the horse fasting all the day before!*" He still calls horseballs, pills, that it is probable they were in the habit in those days of making them much smaller than we do at present. The modern blister or something like it, occurs at p. 517, made of "*oil of bay, four ounces, orpin (perhaps orpiment), cantharides, and euphorbium, each two ounces, make them all into fine powder, and set it upon the fire, stirring it till you bring it to an unguent,*" but it is to be applied as a plaster, and bound on. De Grey nowhere speaks of diuretics. When a horse, from the tight lacing of his shoes has become a stumbler, or cripple, for from such cause it arises, he recommends as a remedy, the horrid operation of slitting his nose open and cutting asunder the two tendons that are passing to the lip, and healing it again! which he says "*will give him the use of his legs so perfectly, as that he will seldom or never trip any more.*"

It is likely the art of rowelling or putting a rowel under the skin, came originally from France, as the word *rouelle* signifying a wheel, is the figure of our modern rowel, being a piece of leather of a circular figure, with a large hole cut through its centre and bound round with tow, this expression of De Grey would also seem to confirm it: "*but if the bone be not out then put in a French rowell,*" p. 596. De Grey though a later writer, does not appear from the number of editions published of it, to have been so well received by the public, or at least, pushed by the trade, as the *masterpicce book* of Markham's.

It was towards the middle of the last century (16th), that the Italians began to cultivate and consider the education of the horse, and published several

elaborate works upon it, some of them appear to be of rather an ostentatious character, and from the horrid plates of bits they filled them with, one should suppose they had lost sight pretty much of the mild precepts of that great captain of all horsemen, Xenophon, who asserts, the breaker-in of the horse should prevail by gentleness and not by force, and should rather act the part of the lover than of the tyrant, for nothing can be more cruel than these bits. One of the earliest of these was published by *Frederici Grisoni*, a Neapolitan, about 1560. Another, entitled *La Gloria del Cavallo*, by *Pascal Caracciollo*, in 1586, or rather earlier than this. The French soon followed in this line of study, calling it the *Manège*, and published at Lyons, 1581, *L'Escuirie de M. De Pavari, Venetien*. And Germany soon abounded with translations of these, which I saw in great numbers in the public library of Gottingen. Also *De Winter*, a native German work, appeared in their own tongue, as also *Mangen Sautern, Fol. Augsburg*, 1599, and others; extending to Holland. *Phwinel* published his splendid performance, *Amsterdam*, 1666. A horrid collection of torturing bits graced most of these, as though a most savage and ferocious beast was to be dealt with. And the more learned work of *Peter a Naaldwyck, Liber Phillipicorum sive de Equorum natura, electione, educatione, disciplina, et curatione*, 4to. Leyden, 1631;—not having much cultivated this branch of study, I do not presume to enter into the respective merits of these works on the *Manège*. The Duke of Newcastle's work (Cavendish's), appeared in England about this same period, and *La Guiriniere* and *De Saunier*, in France, and finally, in 1771 appeared *Berenger's* work on the *History and Art of Horsemanship*, containing very just reflections and much interesting matter, which must gratify every enquirer after this branch of the art; Berenger observes, that one Claudio Curtio, an Italian, brought into England by Robert Dudley, Earl of Leicester, published a book on the *Manège*, and was, perhaps, the earliest ever published on that subject in these kingdoms. I early conceived an aversion to the exercises of the *Manège*, from the crippled, dangerous state in which I found the feet of the horses; it reminded me of a man who should be compelled, at all events, to dance a minuet in tight shoes, with a weight upon his back; this feeling determined me never to pursue it more, till their feet were relieved, otherwise the science itself is both useful and pleasant.

In order to enable us to form a sort of parallel of the state of our art on the continent and in England at this period, I take up *De Solleysel, le Parfait Mareschal*, 1754; though the edition before me bears this date, I find by notes made on the books on this subject, in the public library of Gottingen, being a very ample collection of all countries, which I did in the year 1797, that a German translation of Solleysel was made as

early as the year 1677,* whether many alterations had been made in these later editions I know not, as it seems to have been very much used and circulated in all countries, and such improvements might bring it into consideration as a work of the 18th rather than 17th century. It was translated into English, I find, by Sir W. Hope, in the year 1711, which translation I have not seen. The title of the work is repulsive, as being too presumptuous and knowing; it was, however, an error of the time, and a period of bad taste in these affairs altogether, and as much so in England as abroad. Solleysel, however, to render him justice, was a man of strong parts and understanding, and is often very clear and forcible in his language and remarks; the want of arrangement, prolixity, and repetition, are his faults; his operations also, are often most cruel, especially that of unsoleing the foot, which he recommends more strongly than any of his contemporaries or predecessors, and other remedies he mentions are too absurd and filthy to appear in any book. He often gives in the early part of his work, a happy description of a disorder, and then clouds it again by repetitions, obscure and inferior in value; if we might select particular passages, there are some that could not be exceeded in the present day, and he must be acknowledged to have been by far the best writer of his time in this art.

We learn from Solleysel, that the *Meloe majalis*, was used in France for blistering at this period, before the *M. vesicatorius* was used, which was brought from Spain, being found there in greater abundance, so as to supply the increasing demand. He has given good figures of the *M. maiulis* by an engraving, and says they were called in France *Maii aviculæ*, or *Little May-birds*; hence we see the Linnean name. This insect is very rare, if at all found in England, and the *vesicatorius*† is also extremely rare with us, but in the South of Europe it is not unfrequent: I have found them in large clusters on the privet bushes, smelling strong like mice confined, so as to be perceived at a considerable distance, and before you got sight of them. Solleysel's directions for the examination of a horse previous to purchase, stands unrivalled; others have but pretended to it: in good hands, however, it might at this day, perhaps, be surpassed. He informs us his occupation was to teach riding to the nobility and others, in which it appears from his own account, and I doubt it not, he had great address. He much praises the Scotch saddle used in those days, flat on the seat and high at the pommel. In shoeing, he strictly forbids the heels to be opened, as the smiths call it, that is, cutting away the inflexions, in which he did well; but all the rest of his orders which follow this, are unfortunately of a most mischievous and cruel description; worse

* Der Warhaftig Volkommene Stallmeister, Genf. 1677.

† Now called *Lytta Vesicatoria*, by modern entomologists.

could not well have been devised for ruining the horse; I forbear even to mention them, that such abuses of these inoffensive creatures should not be revived even in remembrance, hoping the operative smiths never attended to these mistakes. He entertained a most unphilosophical idea also, that too much nourishment went to large feet, and actually proposes the absurd measure of reducing them by a tight shoe, less than the foot, of which shoe and foot he has given a plate; this, he asserts, will bring them into good figure!

The word *charge*, much used by us English, for a strengthening plaster to horses' loins and legs, &c. and whose origin always appeared to me obscure, is derived, I find, from the French; Solleysel says "*Emmiellure rouge communement appellé charge*," which sufficiently points out its origin. From this word *emmeiller*, signifying to cover over or coat any thing, is derived probably our expression *coat of mail*, originally written perhaps *coat emmeil*; and the word enamel must have had the same source. The word *emmiellure* would have been much better for English Veterinarians to have used, than the equivocal and indefinite word, *charge*, and as being specific in this sense, I should propose its future adoption*.

After old *La Broue*, he orders a shoe with a wide web, which is a good proposition, but he next orders the heels of it to be thinned outwards to prevent contraction, forgetting that the nailing of the foot would render it nugatory, or nearly so, and such unnatural form of the shoe would occasion a continual strain of the foot against the last nail, which must create more or less uneasiness to the horse, according to the degree of it, and, as the rest of the nails and foot would be perfectly fixed, it could do but little good. He calls this shoe "*Fer a pantoufle*;" and, like some other adventurers of the present day, orders, if it does not succeed, (which it certainly will not,) to unsole the foot, adding to bad measures a greater enormity of cruelty and ignorance: on much the same grounds has been proposed cutting out the nerves of the leg in this day, after the foot has been ruined by shoeing on a bad principle, instead of changing the principle. He also in cases of contraction, most cruelly orders the posterior parts of the foot to be slit up quite to the pastern, and then to force open the heels, and to heal the parts with wedges of tow pushed between, to prevent their collapse! which would not have been necessary had his shoe been of any value.

In respect to purgatives, his chapter expressly on this subject is obscure and evasive;

* The Greeks, and also the Romans, as we learn from Vegetius, called this useful application *malagma*, a term still preferable to the above French one, for our adoption, and also as admitting an adjective construction, which is ever useful,—as *malagmatous remedies*, *malagmatous applications*, &c. The Greek words, *μαλασσω* and *μαλαπτω*, to soften, is perhaps the root of this word; and *emmiellure* may possibly have been a corruption of *malagma*.

he enumerates a great number, but seems to give the preference to aloes and scammony: this equivocal manner I was surprised at, as, in his first volume, he told us expressly that aloes was the only proper purgative; it was perhaps difficult with him to dismiss the usual prejudices of the day, so that on the continent it appears, they had no consistent notions about purging a horse at this day, as also was the case we have seen in England. The scammony he gave in butter, he says, or grease, five or six drams for a dose. He has assumed a credit in another part of his work for the first introduction of the use of antimony to the horse*! It is painful to observe in the progress of knowledge, how many erroneous reasonings and wanderings there are before the simple truth can be expressed, owing often to the greater facility of writing and of thinking, to the more onerous course of actual experiment and induction, or of watchful and assiduous observation. The cruel use of the cautery recommended throughout this work is appalling; what must these poor animals have suffered in these days! the red hot iron seemed to have been with them a continual resource, where they were ignorant of the nature of the disease, and some of his firings are of a frightful description, such as would make one shudder at the miseries of these poor devoted victims to ignorance, who bear with a singular patience often what is uselessly inflicted in this way, as I myself have often observed with surprize.

Near the conclusion of his book is found a highly curious account of preparing horses for the race course, or *training*, as it is called, gathered in England from some jockey engaged in this line of life at this period. It seems to have been got together with some pains and care, but whether a true account or not I do not undertake to determine, for there is much nonsense in it. It may afford, as it is the only account of the kind I know of, interesting matter, to any one engaged in the cultivation of this department of the art, as to the customs of these times.

This copious volume finally terminates by an abridged account of the art of riding, as taught by himself, evidently drawn up with unusual pains and attention, and I expect is valuable, as he seemed here to have had strong and clear views; he was certainly a forcible writer; I wish I could speak as favorably in Veterinary matters of his judgment and humanity.

In reverting again to our English writers, the next attempt to forward this art in England was by Snape—*The Anatomy of the Horse*, folio 1686. It is accompanied with plates, roughly executed, of the various parts of the Horse; the descriptions are done in a very monotonous, common-place way, and are of little interest. In exhibiting

* The horses have no great thanks to return for this favour, I believe.

the brain of the horse, however, he very properly censures the ignorance of those who would cloak their cruelties by the absurd pretence of his being without any.

A little after this, was published, in the reign of James I., Michael Baret's *Hipponomie*, or *Vineyard of Horsemanship*, containing more learning and mathematical reasoning, than any work of this nature and date.

Snape's work was followed by that of William Gibson, which is better arranged, and in better language than any preceding English writer; I mean the thick quarto, published in 1751, for there are various octavo editions, purporting to be the work of Gibson, of very inferior value. On make, shape, and color, and defects of Horses, to be avoided in purchasing, his descriptions are plain and good; his anatomy has not much to recommend it, being brief, loose, and inaccurate. His remarks on food, and especially what respects grass and turning out, seem to have been the result of much experience, and are sensible and good. In respect to medicine, his prescriptions are of a more innocent cast than those of his predecessors, and consist very much of herbs, syrups, and emollient things; but he appears to have been the first who absurdly added jalap to the aloes, and other useless things; for jalap is certainly not a purgative of the horse, as experiments have since clearly proved; and the aloes is always mild and safe, by itself, or, at least, mixed only with treacle enough to give it a tough consistence, as I myself can attest from very long experience, without a single exception to this remark: the druggists, perhaps, might have recommended to him these additions from motives of interest, against which the younger members in this profession should be on their guard. Peripneumony in horses and pleurisy are well described by him, which gets him into some embarrassment respecting the distinction between it and fever. It is surprising to see what doses of aloes they were in the habit of giving at this period, from one ounce and a half to two ounces at a dose; whereas, we find now six drams to an ounce, an ample dose for almost any horse; whether the aloes is better prepared and purer now, or obtained from a different species of this genus, may be the cause of this, I know not. He describes also an *external pleurisy*, as he calls it, of the muscles of the chest, or, in fact, the intercostals, which is known, he observes, by a horse shrinking from pressure, and showing pain if handled in those parts. I apprehend this intercostal soreness is merely the effect of cold and chills inducing inflammation in those parts, perhaps, from being wetted whilst sweating; bleeding, and fomentations, would probably relieve it. He also confounds it with the imaginary disease called Chest-founder, which is simply a retraction of the muscles of the breast from pains in the feet, which being removed, as I have frequently seen, assume their proper fulness and appearance again. I never saw this disease of external pleurisy or thoracic muscular soreness that he

describes; and one should be distrustful where there is not good evidence, as the imagination in obscure cases can supply much, and we may indeed assert almost any thing about horses, where the proof is difficult. He thinks broken wind may proceed from the chest being too narrow, or from too large a heart and pericardium, or thickness of the mediastinum, or thinness or relaxation of the diaphragm; he also describes the lungs as large and fleshy in this disease*. He recommends Gum Guaiacum in Farcy; it may be useful, perhaps, by its stimulant warmth, and is worth a trial. He describes his balls the size of large walnuts. By plate-vein, he understands the vein of the fore leg, and not the flat of the thigh, as the name *plat* would imply. He does not forbid sublimate, arsenic, and other corrosives to the bone spavin, and firing half an inch deep! and for other enlargements, by which much mischief has been done, instead of gentle stimulants more often applied. His attainments in language, we should suppose, were not very great, when we see *parmacitty* for *spermaceti*, *apiphysis* for *apophysis*, and *aristrochia* for *aristolochia*. His definition of Ring-bone has led into much error, being falsely ascribed to the pastern-bone; this bone, it is true, is sometimes from violence morbidly thickened, and enlarged at bottom, but is then simply an enlarged pastern-bone: the ring-bone occupies the ring of the coronet, and is truly an ossification of the cartilages, arising generally from the fixed and motionless condition to which the hoof is reduced by the shoe and nails†.

He seems to have understood the utility of white vitriol, or sulphat of zinc, in closing old sores, as in Pole evil, &c.; but his application of it is hardly strong enough to do good (see p. 419); and is mixed with other things diluting and opposing its operation; he also goes to blue vitriol, and even corrosive sublimate, for the same purpose, having no settled notion. He appears to have borrowed from Solleysel, and the French, the use of whites of eggs in dressing sores, as a digestive. I remember St. Bel used the same in the commencement of our Veterinary College; but I observed a great objection to its use, even supposing it a good digestive, which I very much doubt, and that was its so soon becoming horribly putrid. In foot-diseases, as contraction, &c. he seems not at all to have understood its cause in the operation of the shoe and nails, by keeping the foot fixed; and he seems also to have originated the absurd notion of running frushes being useful, by carrying off humours; a doctrine for which there is not the least foundation, and has done a good deal of mischief: he orders cutting the

* It having fallen to my lot to discover the cause of broken wind, we know, on the contrary, that the lungs in this disorder are puffy, light, and membranaceous, and that it is a true emphysema, or air extravasated, into their substance.—See Rees' Cyclopædia, Art. "*Broken-wind*," written by myself about fifteen years ago.

† Professor Coleman has strangely followed him in this error, and in respect to the treatment of frushes.

horn of the frog away, and putting urine to it, nonsensically calling it, chamber-lye. Diuretics we find with Gibson, used for the grease, and for frushes: his prescription for it shows a strange ignorance of chemistry and pharmaceutics,—he orders, “Four ounces of rosin, an ounce of sal prunelle, and a drachm of oil of amber, to be mixed in a quart of forge-water, and given to the horse fasting!” This is the first regular attempt at a receipt for a diuretic medicine, that I recollect to have seen. The work concludes with a number of coarse engravings of the different parts of the horse, giving a rude notion of his anatomy and external diseases. This quarto of Gibson was followed, after his death, by swarms of octavos, purporting to be Gibson’s work; but, as far as I remember of them, they were very mutilated representations of it; in which not only the booksellers, but the son of Gibson, I think I have understood, had a hand.

Gibson’s book being much sold, at least the octavos, was followed by a numerous host of works of people but little versed in the subject, as Burdon, Bracken, Merriek, Osmer, Taplin, whose declamatory nonsense went through sixteen editions,* and several others, these pursued one another with uncharitable asperity, and puny criticism;

* It was my purpose, and I had indeed began to form a collection, or catalogue at least, of all writers whatsoever on veterinary subjects; but found in this century so large a share written with no view to science, but merely for sale by the booksellers, that I desisted from pursuing it, as such a general account would only serve to confound and weaken the view of those who really were useful. The importance of this kind of knowledge to mankind becoming every day more fully seen, and the public curiosity awakened, the booksellers took care there should be no want of supply on their parts; and the trash published, almost exceeded that upon any other branch of literature, if I may be allowed the use of that expression for it. The trade did not care so much about the contents of the book, if the title-page was but left to their superior arrangement; and there are at present a class of lofty booksellers, who turn authors as well, or at least by their mercenaries; and, when a work of any real research appears, bring out a spurious scion, and, as we have just said, push it into the hands of an indifferent inquirer as *the only-selling book*, defeating the purposes of the original writer. The celebrated John Hunter, I believe, rather than submit to the revolting terms of such booksellers, sold his own works; being denied by the trade, the consequence was, that it scarcely passed through, useful as it was, a single edition, during the lifetime of the author. I mention it for the use of others, more than for any good I am likely to derive from it; as it may lead the matter to be more considered by the public, and by future writers, that I offered my work on the Foot to several booksellers, rather than sell it myself, knowing the treatment I had to expect, for one hundred guineas; though the experiments alone, independent of writing it, cost me three hundred; but was refused, though it contained more important matter than ever had appeared on the subject of the horse before: and being denied this small pittance, and compelled to print and sell it myself chiefly, it has taken fourteen years to dispose of a small edition of seven hundred and fifty copies, giving nearly a third of them away, that the nature of the work might be seen and known. This I state, that the public should not be unmindful of this abuse of their confidence by these editing class of booksellers; as the reform must, I believe, begin with the public themselves, in being made fully aware of it.

but, in reality, left things much as they found them: some parts of Osmer, however, are exceptions to this remark; and James Clark, of Edinburgh, is also an exception, having a good deal of good plain sense and sound observation in his writings: and he was supposed by many intelligent persons to have exhausted the subject of shoeing and the foot, yet was he wholly unacquainted with the inflected nature of the horse's hoof, or its bulbs, or frog-band, or the functions and structure of the frog; nor had he any consistent notions as to the real cause of the contraction of the foot, or any idea of the changed state of the coffin-bone in this disease, nor of the fundamental principles of the foot requiring an elastic shoe; that he may be said scarcely to have got upon the threshold of the subject. Soon after this appeared the large work of Stubbs, *The Anatomy of the Horse*, 1766, which, for accuracy and excellence of execution, confers a credit on himself and his country: and, though I cannot entirely concur with Professor Camper in his extravagant praise of it, who says, he ought to have "a statue of gold erected to his memory;" yet, as plates of reference, they will always be highly valuable on account of their accuracy, and will not be very easily surpassed. The human names were put to this work by a surgeon of his acquaintance, and, being followed too servilely where little or no real correspondence in the parts existed, they rather cloud and obscure its value. I saw this author about six months before his death; he lived in Somerset-street, Portman-square, and complained heavily of the little encouragement he had experienced, even from those who were expending thousands, in one way or other, in their pleasures and sports with these animals. He has left us also many masterly portraits of the best horses of the turf of his day, and of some other animals, young leopards, &c.; and he also has given us portraits of the horse under the highest excitement of apprehension and terror,—as in a thunder-storm, and at the unexpected approach of a lion, creeping from his covert.

Having pursued and brought down our English Hippiatric history almost to the present time, which I have done, in order to keep in view a connected notice of it separately; so, in pursuing this general history, I am now led back again to the Continent, in beginning an account of their labours from the commencement of the eighteenth century to the establishment of a Veterinary School at Lyons, and successive schools of this sort on other parts of the Continent, till one of these establishments is founded in England, and shall conclude this history with a brief enumeration of my own feeble labours and researches to promote the laudable views of this institution, for improving the knowledge of these neglected animals, and of ameliorating their condition and treatment.

Before I proceed to the labours of the continent of the eighteenth century, leading to the

establishment of veterinary colleges, I am led to notice an English work of the year 1704, published at the University of Cambridge; like the works of the Ancients on these matters, it is of a mixed character, uniting rustic affairs with the veterinary art; its title is *Geoponica Geoponicorum, sive de re rustica libri viginti, a Petro Needham, M. A. Coll. D. Johannis socio. Cantabr.* 1704. It is an octavo, neatly printed, with a divided page, Greek and Latin. The first page informs us, these pieces were originally collected by *Cassianus Bassus*, for the use of *Constantine*, surnamed *Porphyrogenitus*, one of the last Greek emperors of Constantinople. This work forms a useful addition to the ancient rustic writers; but, excepting a few biographical notices of the early veterinarians of the time of Constantine, of which we have availed ourselves in the early part of this history, it is not of much interest to the Veterinarian. At Copenhagen, in Denmark, whose veterinary school I visited in the year 1797, was published, early in this century, a work entitled *De Philippia Veterum*, by Joseph Erischen, on the attachment and humanity of the Ancients to their horses and cattle, written in good Latin; apparently to encourage men in their kind treatment of these animals. In the year 1733, *La Guiriniere* published at Paris his *Ecole de Cavalerie*, with the diseases, osteology, and surgery of horses. A second edition was printed in 1751. *De Garsault* published a similar work, entitled *Le Nouveau parfait Mareschal*; Paris, 1746: and *De Saunier* published a similar one; Berlin, 1756. *Severini* published his general comparative anatomy,—*Zootomia Democritea*; Nuremberg, 1745.

The eloquent Buffon next lent his aid to this subject, about the middle of this century; and, though it appears not to have been noticed, was the first who recommended the formation of schools, or veterinary establishments, for the study of horse-knowledge. In writing on the natural history of quadrupeds generally, he is led to dwell largely on the Horse: the historical part is done by himself; the anatomical, by his excellent associate, Daubenton. He drew his materials chiefly from the works of modern travellers, and from the French books of the *Manège*; but does not seem to have dipped much into ancient literature. In his second book he describes the various horses of almost every country of the modern world, in a lively manner, though but few Englishmen would join him in his remarks on make and shape, in which he appears only a copyist of the above writers of the *Manège*. He treats of these animals with no measured step, that it would not suit our views to follow the prolix details of such a work, in which there is much repetition, want of arrangement, and flowery language, more sublime often and speculative than judicious, (so we think, at least,) that we should often say he just inverted the facts. Among other extraordinaries, he seems to have apprehended that some horses naturally shed their hoofs, as deer do their horns! It is

certainly true, that through disease the hoofs are sometimes cast off or shed, or through weakness fall off, but that a part so essentially necessary to the existence of the animal, in a state of nature especially, should ever be shed, in the proper sense of the word, is too absurd to imagine; for, incapable of moving, he would become the prey of every animal around him. The succedaneous hoof also, would be of little value, as it would probably be deficient in not possessing the *Keraphylla*, whose inter-necting arrangement binds the hoof to the foot, and holds it firmly on. He also supposes that the horse has five distinct kinds of neighing, and attempts to describe them; and certainly with different feelings and passions his neighings will vary, but to put any fixed number to these modulations of the voice would be impossible, I should apprehend, that could lead to any useful purpose, or be intelligibly established by any description of words. One of those he gives, is certainly nothing more than an expression of extreme suffering and agony.

In the conclusion of his first book he recommends the study of the horse to the physician, who might, he observes, gain both profit and honour by it, and by the study of the whole veterinary art, as it was styled by the ancients; so that we may consider Buffon as one of the first promoters of the express cultivation of this art in modern times, and the establishment of veterinary schools in France took place not long after.

He has a remark on that singular inversion of the hairs on the side of the horse's neck, near the crest, which we in England call *the feather*, describing it as being an omen of great promise; we, on the contrary, in this country, generally consider it a bad indication, though, perhaps, in reality, it is neither one or the other. He says, they call it the Roman sword.*

He afterwards describes the ass, his account of which is much more interesting than that of the horse, if all be true that he relates of him, his peculiarities, habits, and manners, are truly wonderful. Our English asses have not, certainly, the traits he describes, at least in so eminent a degree. On concluding the perusal of this flowery volume, who but must admire the elegant forcible style of the writer, but who is there that in a general way can acquiesce, with real satisfaction, in its doctrines. The history of the ass is followed by that of the ox, sheep, goat, and swine, which are deserving the attention of the veterinarian. He sets out with considering the ass but as a degenerate horse; but, after a deal of verbiage in proof of it, concludes that he is no horse, but an animal *sui generis ab origine*.

Greatly to the honour of this enlightened nation, the first veterinary school was established in France, by royal mandate, at Lyons in 1761, the convent of *Les Deux*

* *L'Épée Romaine*. Histoire Naturelle, tom. 4. p. 279. Ed. Paris, 1753.

*Amis** being appropriated to this purpose, and Bourgelat, a gentleman of Lyons, conversant in horses, was the first appointed professor, opening his course of instructions in 1762; and, four years afterwards, another school was opened near Paris, at Alfort, near the village of Charenton. I have visited both these schools; that of Lyons is most agreeably situated on the right bank of the Soane, within the entrance of the town as you arrive from Paris; attached to the college is a well-cultivated botanic garden, and behind this garden a line of lofty rocks rise, which bound the river on this side for an extent of some miles, and afford most beautiful prospects of the surrounding country; from the summit of these points of the rock, behind this garden, the snowy mountains of Savoy can be distinctly seen, especially, it is observed, a little before rain, when the air appears, from some cause, to be clearer. The snowy peaks of these mountains make a striking contrast to the vineyards and verdant hills immediately before you, nor would you imagine them at so great a distance. I was politely received by the professors of this establishment, and was present at an annual distribution of prizes of books, chiefly brought from Paris, and given to the most deserving pupils, though one, I observed, refused them. This ceremony is carried on in much form, and one of the cloisters of the building is fitted up for the purpose with rows of benches, and a platform or stage is erected at one end for the prefect and officers of the college. The Count de Tournon presided on this occasion, to whom I was introduced by the professors. A noisy military band played during the whole time of this little fête, and many well-dressed ladies and gentlemen of the town and its environs were present, and seemed to take an interest in what was going forward. I left behind me the best gift I had in my power to bestow, in return for their politeness; consisting simply of a box, neatly made, with a horse's hoof, modelled in pasteboard after my own manner, which was much approved, showing the principles of its singular formation. I left also with them a Tablet-shoe, the first that had been introduced into France. Several polite agreeable men were attached to the establishment, but the society of Prof. Bredin and his amiable family gave me most pleasure. In their education they follow, even to servility, the works of Bourgelat, whose praises they largely dwell on, though I think him inferior to Lafosse, and both to Vitet; but there is more of the tact of the practitioner in Lafosse than either of them. The pupils appeared to be pretty numerous and assiduous. There is one part of their education which is omitted in our college, and may be worth noticing, which is,

* A few years since, two coffins were found beside each other in an old part of the building, with no inscription or clue of any kind discovering to whom they belonged, but it was conjectured they contained the bodies of *les Deux Ames* after whom the college was named. This circumstance I had from Prof. Bredin.

that no pupil is suffered to receive his diploma till he can make a horse-shoe, and nail it on; and when we consider that this is not so difficult a thing, as it is learnt by every country booby in a very short time, so it would be, I think, well deserving the attention of our own college, and would, in after-life, render the pupils more independent of their men, as they would be able, on an emergency, to officiate; also, at all times, in case of the practice of physic failing, it would secure them a livelihood.

There is no want of parade and formality in these French schools, which may be necessary to repress the more daring and presumptuous dispositions of this lively people; it seems also, however, to overawe freedom of enquiry, and keeps them from forming opinions not licensed by authority. One of them, I understood, had read my performance on the foot, and ventured, in his answers, to conform to his convictions; but was sent back, without his diploma, to learn his lesson again. Finding that my work was not much circulated among them, on returning to my hotel I determined to offer twenty copies to be given to such of the pupils as had not received prizes that year, for it was said they could not very well purchase it; it was, however, declined by some of the professors, as, they said, there was no precedent for any thing of this kind; I submitted, and left them to do as they pleased; they, however, told me they should be given them after I was gone, and when they had returned from their vacation. In these schools of France not only the horse, but every domesticated animal, and even agriculture, is studied.

Similar establishments succeeded, in Vienna, Berlin, Copenhagen, England, and more recently Stutgard, Wirtemberg, I believe at Naples, and on the borders of Spain, and at Utrecht in Holland. There is an annual *proces verbal* from the French colleges, but, on looking them over, I did not see much to interest, in a professional point of view: they serve to point out to the people those who have attended these institutions, especially, and to declare to their government the assiduity of the professors.

Our own English college was established in the year 1792, under the superintendance of St. Bel, with whom I was intimate, and, in his presence, led in the first horse that ever regularly entered those stables. Vial was his real name, and St. Bel only an assumed one, that when so called, the French did not at first know of whom I was speaking: a village near Lyons, the place of his birth, is called St. Bel, and from it he took this name, as he told me. Having been rather wild in his youth, he was used to say he had many enemies, and he chose to conceal himself from them by this disguise; also this name, as he observed, gave him an air of noble descent, which I heard him, half in earnest and half in jest, once express; and by this name of St. Bel he is exclusively known in this country. In figure he was a tall, stout, bony man, of a very dark swarthy complexion, and prominent cheek-bones; the lower-jaw large,

and dark eyes. His manners were polite, open, and insinuating, but exceedingly jealous and vindictive to any one offending him. He was suspicious to a degree, even of the pupils, and would sometimes listen at the door of their rooms to hear if any thing passed to his disadvantage, and to learn their opinion of him: and on one occasion he procured the dismissal of three or four pupils from the college, from information, there is every reason to believe, so obtained. In his profession he had real practical knowledge as an anatomist of the horse, especially of the bones and muscles; and he had considerable skill, I have understood, in the manège, but his physiology and therapeutics were quite of the antient French school. His best work is on the death and opening of the celebrated Eclipse horse; he availed himself of this opportunity to make a comparative view of this horse with the ideal medium standard horse of the French schools,* that is, a horse supposed to possess every quality to a certain point, and none pre-eminently; and measured by such a standard, Eclipse must be found strangely different. These differences from the perfect horse, as it was called, were humorously termed defects by the reviewers, but very erroneously, and excited a smile at St. Bel's expense, that a horse so perfect should be so very defective. These differences were in fact the variations of a first-rate race-horse from this ideal standard; and it would appear necessary, for useful comparison, that there should be not one medium standard, but a standard for each particular breed, or purpose, for which the horse is employed, and then the parallel would be both easy and useful. In this work he also entered upon the novel enquiry of the degree of flexion and extension each joint of the horse possessed, measured mathematically, a study not much cultivated since. This volume, which I saw the printing of, was much indebted to the elegant pen of one of the members of the committee, without which it would have been but indifferently suited to an English taste.

St. Bel also published on the subject of shoeing, and went so far as to issue casts, in plaster, of feet, with brass shoes, along with his work, that the subject should be fully understood; but his Treatise, though laboriously pursued, did not throw much light on the subject, from his not being aware of the real structure of the foot, nor of the true cause of contraction, for he believed that these evils could certainly be avoided, if his directions for shoeing were complied with.

St. Bel died in the autumn of the year 1793, of a fever of very remarkable appearance, having boils and buboes in various parts of the body, and Dr. Crawford,† who attended him, observed, that he had never seen in this country any fever that so strongly resembled the plague as this did of poor St. Bel. His interment took place in a vault

* First published by Bourgelat.

† Author of the celebrated Essay on Heat.

in the Lutheran Chapel of the Savoy, and, as I understood, by the wishes of his wife, who was of this communion; and the ceremony, at which I was present, was performed, if I rightly remember, in the German language.

St. Bel's death was severely felt by the young establishment, and some time elapsed before any professor could be found to occupy his situation. At length it was accepted conjointly by William Moorcroft and Edward Coleman; the former, to my great regret, soon after resigned, and the latter, I hardly need say, has retained the situation ever since.

Twenty-five years, and upwards, the College has now been in progress, and it must be admitted, with pain, that the public confidence is not great in respect to the profession, which is felt by many engaged in it; and true it is, that buildings of brick and mortar, however called, cannot confer knowledge; nor, of necessity, men, however titled, placed in them: this invaluable treasure can only flow from individual research and painful perseverance, and we must wait her period; perhaps, when some present delusions have passed away, her course may be more rapid, and her reception more satisfactory. A second veterinary college, somewhere in the North, as in York, or Edinburgh, would, by the powerful influence of rivalry and emulation, keep the other alive, and from setting upon the lees; but, in this case, she would be more efficient, if resting on her own merits, and if Government had no interference with it, farther than erecting a few stables, a house for the master, and a forge, let her then maintain herself; and that she would readily do, if good for any thing, by the numerous avenues to profit, which an establishment of this kind presents, by the livery-keep of the horses, by subscriptions, by fees (not exorbitant ones,) for professional opinion, by the bonus given for education by the pupils, and emoluments arising from the forge, which would together amply maintain a moderately-minded professor, without any grant from parliament, or being burthensome to the public. Carriages and country-houses might not then abound, nor disease, but the duties of the office, and the progress of the art would nothing suffer from these deficiencies: for it is possible, that buildings, especially stipendiary ones, expressly to advance knowledge, may become, from miserable jealousy and low intrigue, the very means of opposing her course, that her sacred path cannot be left too free. Quitting however these considerations, and again pursuing the course of our history, in order to conclude it, I am necessarily brought to some of my own earlier labors, which I shall endeavour simply to give an outline of, though I feel it difficult not to say either too much or too little upon them; in doing which, I would wish to avoid any particular affectation of modesty, equally with any degree of unnecessary ostentation.

The first discovery I shall have to speak of, is the *Broken Wind*.—I believe it was about the year 1794, that the cause of this puzzling complaint occurred, whilst I

was studying at the Veterinary College. I published no account of it for six years after, when, on my return from a two years' visit to the continent in these pursuits, I was solicited by the editors of Dr. Rees' Cyclopædia, to furnish a few articles for their work; and this will be found detailed at some length, under its proper name, *Broken Wind*. It may suffice here just to observe, that the real cause of this much-investigated disease, is at last found to be a true *Emphysema* of the lungs, or extravasated air lodged within the membranes of the cells, occasioning a light puffy appearance, a whiter color, and a crackling under the touch of the fingers. It was probably this more than natural whiteness, and consequently freedom from increased redness, the usual concomitant of disease, that occasioned it so long to be overlooked; for many writers had declared that it could not be in the lungs, they were so perfectly free from disease, and it was a small bladder of air on the outside of the lungs that first attracted my attention to it. For other particulars, I must refer the reader to the original article before mentioned, which, at some future day, I intend to republish, with additional matter.

Next, in respect to the foot of the horse, my labors have been almost unremitted, and blessed with many discoveries, I believe, of no mean importance. The embarrassing cases which continually occurred in my early practice, made me give a primary attention to this organ. It was not till after many disappointments in turning horses out to grass to recover feet, without success, that I began to apprehend that it was the too solid resistance of the shoe and nails to an organ endowed with a high degree of natural elasticity, that produced these injurious effects. To give more certitude to this apprehension, an experiment was necessary of a very tedious description, that of following the same foot with plaster casts for several years, and comparing them, and the evidence obtained was, a constant annual diminution and hardening of the foot, from the too rigid embrace of its protector. After seven years of trial, I began to have engravings made of the feet, and to publish an account of the experiment; and, whilst printing it, was led to examine the hoof more attentively as an elastic organ, and found the whole structure especially subservient to the law of an indefinite yielding to the weight or exertion of the animal, but which most essential principle had been wholly overlooked by the adepts of the shoeing art in their practice. The actual construction, also, of the horse's hoof, was laid open to me in the following manner:—A young fresh hoof had lain on my desk some days, and, tired almost of seeing it, I determined, without any particular object, to make an horizontal section of it, and throw it away; in inspecting it, after sawing it asunder, I observed the loose edges of the frog-band and bulbs, and, tracing them, found them to make one entire unbroken circle round the hoof, to my great surprize, as the hoof's structure then admitted of an easy explanation;

the bars were next seen to be portions only, of the wall, inflected inwards towards the centre of the foot, so that the hoof consisted simply of two circles, one of elastic horn and one of firm horn, instead of several parts, as was before imagined; the sole being merely a supplementary part uniting and filling up these parts, and closing the lower opening of the hoof. Contraction, and the diseases, which were daily taking place in the foot, without our being able to give any just account of them, now admitted of easy explanation. The more elastic the foot, as in blood-horses, the more mischievous the shoe. In fitting removeable shoes to the hoof, I also discovered its cylindrical form, being before supposed to be a cone; next was observed, the obscure cause of horses not being often benefited when turned to grass for contraction, if they had been long shod, viz. that the coffin-bone was partially absorbed during the collapse of the hoof; next the difference between a natural coffin-bone and one that had been shod; and, finally, in the second part, is seen the curious structure of the internal frog, of substrated layers of tendon, with intervening elastic ligament, which before had been considered "*as bags of yellow oil.*" The true cause of running frush also occurred, and a successful mode of treating this troublesome complaint. Other works had preceded these, as the History of the *Bots of Horses*, and their highly curious manner of life and propagation; an Essay on the *Gripes of Horses*, its cause, and a successful mode of cure; also, a *new elastic horse-shoe*, which wholly prevents contraction: but, as I find any outline of these researches, however abridged, would be too bulky for addition to this history, I shall content myself with an enumeration below, of the works themselves, none of which, I may safely aver, were ever published, for the mere purpose of the booksellers, but to expose some interesting discovery.

These Works may be had of the Author, No. 7, Taunton Place, Regent's Park; or of the Booksellers, T. and G. UNDERWOOD, Fleet Street; or J. CHAPPELL, Pall Mall.

A TREATISE on the FOOT and SHOEING, in which the obscurities of this Art are explained, and many new parts shewn; a Defect demonstrated in the principle itself of MODERN SHOEING; more mischievous to the Feet than the Abuses complained of; with nine elegant Plates, 4to. price 1l. 1s.; to the above is added, an important Narrative of the Consequences of turning HORSES to GRASS WITHOUT SHOES, in order to remedy contracted Feet. Also, an Essay on the Knowledge of the ANCIENTS respecting SHOEING. Originally published in two Parts.

STEREOPLEA; or, Part III. On the FOOT of the HORSE, concluding the above Work, and is confined to the actual Practice of this Art; and also an efficient Remedy for the evil Effects of the Common Shoe. Price 10s. 6d. with three Plates and numerous Figures. The above are out of print, and scarce.

DIRECTIONS to FARRIERS respecting cutting the FROG, price 6d.

A DESCRIPTION of the STRUCTURE of the HORSE, as it appears by making a

Section through the Body, with the Diseases of the Parts exposed; and also a new account of the Framing or General Composition of the HORSE. Price, with four explanatory Plates, 4to. 10s. 6d. and with a large coloured Figure, price 2l. 2s. 1813.

AN ESSAY on the GRIPES of HORSES, with an improved and successful Mode of treating this Disorder; the Secret Remedy long used by the AUTHOR in this Complaint, is made public, price 7s. 1816.

A DESCRIPTION of a NEW APPARATUS for CASTING HORSES, when it is necessary to secure them for performing painful Operations, with a Plate, price 2s. 6d. This Invention was rewarded by a Medal from the Society of Arts, Manufactures, and Commerce. 1814.

Also, a Translation of the above Work, on the FOOT; printed at Paris, revised and arranged by the Author, price 10s. 6d. with Plates.

HISTORY of the BOTS of HORSES, and of other Animals. London, 1815. Giving an account of their Species, Habits, and Propagation; correcting some errors of Linnæus, Vallisneri, and Reaumur. Two new Species are added, and some account of the *Skin Flies* of North America, forming a new genus, (*Cuterebra*), since confirmed by Latreille. Two Plates, with numerous Figures, price, coloured 15s.; plain 10s. 6d.

DESCRIPTION of a new-invented HORSE-SHOE, which moves to the impressions of the Foot, with Figures, price 7s. 6d. London, 1824.

Let me here just notice to the reader, that having begun to publish in quarto, that the horse's foot should be faithfully represented, so I have continued this handsome format ever since, and shall continue it as long as I publish; that any number of my Essays may be bound together at any time, forming a handsome library volume, and will be found nearly, or quite, as cheap as the octavos or duodecimos of the Booksellers; and on re-selling them, I trust, much cheaper.

The SAND CRACK and QUITTOR.
Out of Print. London, 1818.

On the NATURE and CURE of
RUNNING FRUSHES and CORNS. Lond. 1813.

On CANKER and RING-BONE.
London, 1822.

REFORMED PHARMACOPŒIA
for HORSES; containing, a general view of Horse
Medicine, a *Materia Dietetica*, *Materia Medica*,
and *Pharmacopœia*, with many new and valuable
Prescriptions. Second Edition; 7s. 6d. 1824.

Also, shortly will be published,

SOME ACCOUNT of a NEW IN-
STRUMENT called the CLAUDUX, for boring
the Hoof to any depth for the Nails, by which in-
dividuals may shoe their own Horses. With a
Plate, price 3s. 6d.

Also, A Disclosure of the best Me-
thod of making the Expansion Shoes and putting
them on. With five Plates.

A MODEL of the HOOF in Paste-
board, which takes to pieces, and exhibits the pro-
perties of the Hoof familiarly, with a neat box and
description; price 12s.

The ARTICLES communicated to Rees's Cy-
clopædia, are as follow: — ANATOMY of the
HORSE, BITS, BOTS, BLINDNESS, BLISTER,
BROKEN WIND, CANKER, CORNS, CURB,
COLLAR.