ANIMAL SIMPLES.

ADDER.

THE Adder, or British Viper (*Vipera berus*), is the only venomous snake met with in England. It may be found in early summer on a sunny dry bank, or patch of heath. The reptile is small, of an olive-brownish colour, its body being marked with a zig-zag line of darker hue down the whole length of the back; the broad head is oval in shape, bearing a V on its top, whilst widening behind the eyes, and narrowing to the neck; the tail is blunt, and the whole body covered with small plates or scales. It is a shy animal, getting quickly out of man's way, and attacking only if closely pressed; the creature then coils itself up, elevating its head and striking at its assailant. When it bites, the poison, which is rarely, if ever, fatal, is conveyed through a tubular tooth, or fang. The symptoms vary considerably in different individuals; but, if serious, are those of prostration and faintings, with a faltering pulse, yellowness of the skin, and great pain about the navel. A ligature should be applied as quickly as possible, very tight around the wounded limb above the bite, and the wound should be sucked. At the same time, ammonia should be given—half-a-teaspoonful of sal volatile for each dose—or brandy in hot water repeatedly until the patient revives. Olive oil should be rubbed immediately and freely into the wound, general perspiration being also artificially induced.

Rustic folk in Warwickshire suppose that the only certain remedy for being bitten by an Adder is to kill the offending reptile, and apply some of its fat (raw, or melted down) to the wound, after the puncture has been well sucked. This practice is in accordance with the old maxim: "Seek your salve where you got your sore." In former days the flesh of the viper was given to lepers. Pliny says, the physician of Cæsar Augustus ordered these little creatures to be taken for healing intractable ulcers; and Galen tells of elephantiasis, a grievous skin disease, being cured with remarkable success by eating vipers dressed like eels, or by drinking viper wine.

Robert Lovell in his *Compleat History of Animals and Minerals*, 1661, said, "the flesh of the viper is hot and dry, and purgeth the whole body by sweat: also being eaten or drunk it helps the leprosy, and cures ulcers"; further, "these adders be round and cast their skinne by sliding through a narrow passage when fasting: they lay down their poison when drinking."

In the *London Pharmacopœia*, 1745, "viper's wine" was ordered to be made thus: "Take of dried vipers six, of Spanish wine two pints, and digest for a week." It was thought to be stimulating and "a rare medicament for all sickly persons."

In an old black-letter book is given the following recipe: "Take a living viper, remove his head, tail, and viscera, excepting his heart and liver, cut it into little pieces and mix them with the blood, then add of well-water twelve ounces, boil for two hours in a close vessel and strain, then the broth will be made." Dr. Salmon wrote in his Pharmacopœia (1696): "The broth of them cureth the French poxe and the leprosie, eating half a viper at once, and fasting five or six hours after

it, so also they cure all old ulcers and fistulas, clear the eyesight, help the pulsie, and strengthen the nerves." "The essence of vipers (made from their livers and hearts, together with the spirit of vipers) is a most excellent medicine, dissolves all excrements and coagulations of humours, dispersing, cleaning, and purifying like sope; carrying out every ill by urine, sweat, or insensible transpiration, curing all sorts of gouts, the stone in both veins and bladder, leprosie, French poxe, scurvie, melancholy, all obstructions and putrefactions, loss of strength, decays of nature, and consumptions; so that as it were, it even renovates a man, by taking away what is contrary to nature, and adding what is requisite."

Dr. Thomas Willis, 1621–1675, who first attempted to reform the Materia Medica in a right direction, said, "The use of a viper and the preparations thereof, doth enough commend the wonderful virtue of volatile salts in a grievous impetigo, and also in curing the leprosie itself. Galen reports that drink being poured out of a bottle wherein a viper was put to poyson one labouring with an elephantiasis, and so given him to free him from his misery, proved his remedy, and what was destined for his murder dispatched an incurable disease; and hither, he adds, relates the analogy from the nature of this animal whence they collect that it helps in this disease, because the viper yearly shakes off his scaly coat, therefore some think its particles prevalent to throw off the leprous skin of a diseased man; but though we do not attribute much to these things, yet it is manifest by frequent observation that remedies of a viper do profit in the impetigo and leprosie, the true reason whereof ought to be ascribed much to the volatile salts wherewith this animal is endued."

Long before Dr. Willis wrote as above, Bartholomœus Anglicus had said (in 1250), "To heal or to hide leprosy best is a red Adder, with a white womb, if the venom be away, the tail and the head being smitten off, and the body sod with leeks, if it be oft taken and eaten; and this medicine helpeth in many evils, as appeareth by the blind man to whom his wife gave an Adder with garlick, instead of an eel, that it might slay him, and he ate it, and after that by much sweat he recovered his sight again."

In France and Italy the broth, jelly and flesh of vipers are much esteemed now-a-days as a strengthening medicine; whilst the Sardinians take them in soup. Quarles (1620) wrote about wines made from the reptiles as giving energy to the sexual organs.

Viper bites are more dangerous in the spring, after the torpor of winter is over, than in the autumn. The poison when applied to the tongue causes a sense of numbness, and if exposed to the air soon looks like gum arabic. If the mouth is not excoriated Adder venom may be swallowed in a considerable quantity without doing any serious harm. The poison of six vipers was given to a blackbird with no other effect than that of slight stupor.

Some have thought there exists a marvellous antipathy to the ash tree and the beech by all the viper brood. Pliny said, "If an Adder is encompassed about with beech or ashen twigs on one side, and a fire on the other, the Adder will attempt to pass through the fire rather than over the boughs: thus ash leaves as well as those of the beech were administered as an unfailing remedy for the bite of an Adder."

Miraculous powers were supposed to be acquired by the Druids through their possession of a viper's egg

laid in the air and caught before reaching the earth; all the brood of vipers pursuing the particular Druid, who became safe if he managed to cross a river.

It was an ancient belief that the young of the viper destroy the mother by eating their way through her bowels as they are born alive; hence the Romans punished parricide by drowning the criminal tied in a sack with a viper.

The title "an adder" is by mistake, and should be written "a nadder," from the Anglo-Saxon "nœdre," a snake.

The viper is so called from *vivus*, alive, *pario*, I produce, because the membrane which surrounds the eggs of its young is broken at birth, and the newly born vipers are straightway as fierce as their parent.

"For stroke of viper" said the Saxon leechdoms, "remove from thine ears the wax, and smear around therewith, and say thrice the prayer of St. John"!

Near the Land's End in Cornwall the country people hold it is not safe to venture among the furze without a milpreve, because of the numerous adders. This milpreve (*mil-prer*, a thousand worms) is the *Adderstone* of popular legends, variously known as adder's bead, serpent stone, Druid's glass, etc. It is really a ball of coralline lime-stone, the section of the coral being mistaken for young snakes. The Adder is thought to make it under a charm if found asleep, and impaled forthwith on a hazel stick in the centre of its coils. Richard Carew says in his *Survey of Cornwall*, "The country persons retaine a conceite that the snakes by their breathing upon a hazel wand doe make a stone ring of blew colour in which there appeareth the yellow figure of a snake, and that beasts which are stung, being given to drink of the water wherein this stone hath

been socked, will therethrough recover." Small perforated stones are sometimes hung on cattle to charm away adders. It is further a Cornish superstition that when an Adder is seen a circle should be rapidly drawn round it on the ground, and the sign of the cross made within this, while the two first verses of the sixty-eighth Psalm are recited.

In Sussex there is a common saying, "Look under the deaf Adder's belly, and you'll find marked in mottled colours these words:—

> "If I could hear as well as see,
> No man of life should master me."

In Leicestershire the saying obtains: "It'll bring you good luck to hang an ether skin o'er the chimbly"; and in Cornwall it is believed that if the slough of an Adder be suspended on the rafters the house will be protected from fire.

Shakespeare makes Autolycus in the *Winter's Tale* discourse of a ballad to a very doleful tune, how "a usurer's wife longed to eat of Adders' heads and toads carbonado'ed"; whilst Brutus says in *Julius Cæsar* "It is the bright day that brings forth the Adder, and that craves wary walking." Futhermore, Petruchio asks Katharina in *Taming of the Shrew*, "Is the Adder better than the eel because his painted skin contents the eye?" "It is told," quoth St. Francis of Sales, in the *Devout Life*, that those which have taken the preservative commonly called "the fat of St. Paul" do not swell when bit and stung by a viper; in like manner "humility and meekness preserve us from the swelling and burning heat which injuries are wont to raise in our hearts." Bishop Taylor and other old English divines said: "The true Christian not only kills

the viper, but, like the skilful apothecary, makes antidote and treacle of him."

According to Baptista Porta (Naples, 1590) and the ancients, among beasts the lion most resembles the man, and the leopard the woman; among birds the resemblance to man is found in the eagle, and in the partridge to woman; among reptiles man's likeness is found in the dragon, woman's in the viper. (*See also Viper.*)

AMBERGRIS.

Ambra grisea, grey amber. This animal excrement (from the Whale) is one of the few that are still retained on the shelves of druggists. It is a solid, light, fatty substance, ashcoloured, marbled, and often speckled with white, found floating on the waters of the Indian Ocean, or on the shores of the Moluccas, and other islands. It breaks easily, but cannot be reduced to powder, though melting with heat as wax does, and gradually dissolving in spirit of wine. Being strongly scented, like musk, or valerian, it powerfully affects the nervous system, and is therefore very useful in the treatment of hysteria, whilst much commended for the weakly giddiness of old persons. Formerly Ambergris was thought to be frozen sea foam; but it is now known to be the excrement of the spermaceti whale when lean and sickly. On pounding this substance (found within the intestines), the presence of numbers of cuttle fish beaks is revealed, which are recognised as most probably causing the secretion to have been formed and voided by the fish. It is an unctuous matter, with an agreeable odour, which improves by keeping. Although insoluble in water (fresh or salt), it can be slowly taken up by alcohol, after grinding it with sand, but even then occupying four months in the process before the solution

is ready for use by perfumers. They find it invaluable for rendering the scents of various essential oils with which it is mixed more intense and enduring.

Ambergris contains a resin, benzoic acid, adipocere, and charcoal, with a peculiar principle called *ambrein*. In Turkey it is employed to stimulate the sexual functions. Formerly the said material was much used in this country as an addition to wines and sauces. French chemists prepare a tincture of Ambergris which is of use in low fevers, as well as for hysterical spasms. From five to twenty grains of the odorous substance are given for a dose. Also a trituration is made (H.) therefrom by us, together with sugar of milk, for medicinal use; five grains of the powder to be taken three or four times in the day, with a spoonful of cold water. This is an admirable remedy for anxious wakefulness, and for a nervous spasmodic cough. Doses of the same, reduced by considerable dilution, will serve to allay morbid sexual excitement. "Concerning Ambergris," says quaint old Fuller (1656), "that is *gray amber* from the colour thereof, it is almost as hard to know what it is as where to find it. Some will have it the sperme of a fish, or some other unctuous matter arising from them; others that it's the foam of the sea, or some excrescency thence, boiled to such a height by the heat of the sun; others, that it is a gum that grows on the shore; some physitians holding one way, and some another; but this is most sure that apothecaries hold it at five pounds an ounce, which some say is dearer than ever it was in the memory of man." "It is a rare cordiall for the refreshing of the spirits, and sovereign for the strengthening the head, besides the most fragrant scent, far stronger in consort when compounded with other things, than when singly itself."

An old provincial English drink was "Amber Cawdle," made of "Ambergrease," and capable of restoring the generative powers. "You may talk," said Ravenscroft (1622), "of your amber caudles, your chocolate and jelly broths, but they are nothing comparable to youth and beauty."

Among the minor objects of personal use detailed in an inventory of Margaret de Bohun (1310), is a "*poume de aumbre*," or scent ball, in the composition of which it is supposed that Ambergris formed the chief ingredient.

About the third year of King Charles II., a mass of Ambergrease was found in Cornwall at low water, close to the shore of the manor of Anthony, then belonging to Richard Carew, Esq.

Southey, quoting from Flacourt, tells that Ambergris was burnt by the Portuguese in sacrifice at the graves of their ancestors.

In Milton's *Paradise Regained*, we read of:—

> "Beasts of chase, or fowl of game,
> In pastry built, or from the spit, or boiled,
> Gris-amber steamed."

ANIMAL OIL.

"ANIMAL hartshorn," "Dippels oil," "Oleum fœtidum," etc., as sold by druggists, is an empyreumatic oil, obtained during the destructive distillation of bone, ivory, hair, or wool, being re-distilled again and again until a perfectly colourless oil is produced. Chemically it is a most complex substance, and contains at least methylia, ethylia, tritylia, amylia, aniline, pyridine, picoline, lutidine, pyrrol, benzol, and a mixture of several nitriles. It is very volatile, becoming yellow on exposure to the air, then brownish, and black, whilst

growing thicker. It will mix with alcohol and ether, but only sparingly with water. To preserve its white colour and thin consistence it must be corked up, and carefully excluded from the light.

The Animal Oil of commerce is procured during the manufacture of "bone black." It is identical in its nature with the "Oleum cornu cervi," or "Oil of hartshorn" formerly used in medicine. Reichenbach obtained Creasote from it, and ascribed to this principle the supposed virtues of the oil. When rectified it is a colourless, thin, oily fluid, having a penetrating odour, and a pungent taste. It may be taken in moderate doses beneficially for hysteria, epilepsy, chronic rheumatism, paralysis, and to expel tapeworm. When given more largely it produces the effects of a remote narcotic. From five to ten drops excite a sense of warmth in the abdomen, making the pulse more frequent and stronger, whilst increasing the sweat and urine. The oil may be mixed with powdered sugar, or with spirit of ether.

Applied externally it is an energetic stimulant, and has therefore been employed against gangrene, as well as for indolent bruises and cramp. Some years ago (in 1841) Ulric Palmedo, of Berlin, made excellent cures of consumption, even in its advanced stages, by friction with this "fetid animal oil," some special volatile curative principle being certainly evolved. From a teaspoonful to a teaspoonful and a half of the oil (whereof the stench is extremely penetrating, and almost insupportable to some) was to be rubbed in over the front and sides of the chest each night and morning with the palm of the hand, in a small low room having few windows, so that at the same time the fumes diffused therein might be inspired. The chest

was to be afterwards covered with a large piece of sheepskin leather, and, so as to protect the clothes, the patient should remain in bed, or not, as seeming most desirable. In each case the inhalation of the volatile vapour was an important factor. Though the treatment might seem at first to aggravate the cough, and to increase the difficulty of breathing, nevertheless it was to be persevered with ; then presently the pulse began to improve, and all the worst symptoms to become ameliorated, even in desperate cases. A trituration of the oil with powdered sugar of milk is prepared (H). Its aniline principle when given to animals in toxic quantity, will produce violent spasms ; and the diluted trituration may be fairly taken to relieve these, when occurring from other causes.

Hoffman says that Animal Oil administered in moderate doses will induce a calm sleep, and gentle sweating, without heating the body, or being followed by any reactionary weakness. It should be always kept in a well-stoppered amber-coloured glass bottle.

Other animal oils of a more ordinary kind are given as medicinal simples, or applied for homely curative uses ; such as cod-liver oil, whale oil, sheep's wool oil (lanoline), and neat's foot oil. The last-named, *Oleum bubulum, axungia pedum tauri*, is made by boiling the feet of the neat (ox, or other beeve) when deprived of their hoofs, in water, skimming off the oil which rises to the surface, and keeping it for some time on warm water. After the impurities have settled it is ready for use. Neat's foot oil, when of good quality, is nearly inodorous and tasteless, but becomes somewhat thickened on exposure to the air, though not readily turning rancid; it yields glycerin and fatty acids. Commercially it is employed for softening leather, and medicinally

it has been given as a substitute for cod-liver oil; but it is devoid of the specific fish principles which make this latter so valuable; besides, as commonly met with, the neat's foot oil has a singularly repulsive smell and taste, whilst tending to provoke diarrhœa as a stale animal product. "*Bovem in linguâ habere*" was, among the Latins, "to have an ox on the tongue," or to be bribed to silence. Inunction of the body and limbs with neat's foot oil when fresh and sweet, may be practised with benefit against atrophy, so as to soften the skin, retain the animal warmth, and promote nutrition by a supply of fat from without, which is absorbed into the system.

ANIMAL SUBSTANCES.

In primitive British doctoring the entrails of animals and the bodies of reptiles were favourite medicinal remedies, each being thought curative somehow of the corresponding organ or part in man when affected by disease. Throughout China and other Eastern lands a like method of empirical cure by such substances is still pursued.

One of Sir Edwin Arnold's poems of Japan turns upon the necessity which had arisen to obtain a fox's liver for the cure of jaundice in a Royal Princess; and as a reward for kindness once shown by this lady to the tribe of foxes a fox-wife brings her husband's liver, and lays it at the foot of the Princess's couch After which fashion many of the animal substances were medicinally prescribed by physicians of old, such as the (*caput mortuum*) powdered skull and brain of a young man, as "a noble antiepileptick"; the liver, washed in wine and dried in the sun—together with the hair—of a mad dog for hydrophobia; the pulverised lungs of a fox

for disease within the chest; the cast-off skins of snakes and adders for leprous disorders of the human skin; cooked sheep's bladder, or goat's bladder for incontinence of urine, or diabetes; and the spinal marrow of an ox for weakness of the loins, or lack of sexual vigour in the human subject.

But within quite recent times a search for medicinal virtues in the glands, and several organs of healthy animals for curing diseased conditions of the same organs in man on a scientific basis, has received a really true impulse, especially through British experimentalists.

Marked success has been obtained by them, for instance, through giving from a sheep the gland (thyroid) which is found at the neck in front of the upper windpipe, for a morbid enlargement of the same gland, produced in any person through living in a district where the water contains lime, and the local conditions are unfavourable to health. This gland in a human being secretes certain elements which are indispensable for the whole bodily welfare, so that if they are arrested by a disease of the gland called goitre, all the functions of the system suffer serious impairment. But it is now learnt that if even a small portion of the same gland procured from a sound animal is given medicinally at intervals, then the lacking secretion is stimulated afresh within the human body, and health is restored. This animal gland does not act directly as a mere food, but it serves to regulate the nutrition in general, and to renovate the strength at large. Half a gland given once a week seems to be effective when taken in a cooked form, or if desiccated it may be given as a medicine in doses of from ten to fifteen grains. This is also of great remedial value in acute and chronic melancholy.

High expectations are being entertained, and are already meeting with fulfilment, of effecting similar cures by giving for their allied diseases the like preparations of other glands got from the healthy animal: such as the breast gland, the kidney, liver, ovary, and testicle.

The thyroid gland (in front of the throat) consists of albumen, gelatine, stearine, oleine, alkaline, and earthy salts (of lime, magnesia, and potash,) with water, and a trace of iron.

Preparations of healthy animal organs, and tissues exercise a remedial action within the human body in one of two ways, intrinsic, or extrinsic; intrinsic when they replace some necessary secretion which is defective in the patient: extrinsic when they act merely, like any other drug, without relation to the organ or structure from which they are derived. The intrinsic effects can only be derived from preparations of such glands as secrete a fluid within the body for its uses, such as the thymus, the thyroid, and the stomach-bread; or the same fresh glands themselves may be taken very effectively in small quantities. For the urinary difficulties of old men, because of the gland (prostate) at the neck of the bladder becoming thickened and hard through advanced age, the chopped prostate gland of a bull may be given with marked benefit, a quarter of a fresh gland finely minced in bread and butter, two or three times a week. This is better than administering tablets of the dried prostatic substance, in which the active constituents have probably become more or less changed. It was by giving extract of the throat gland (thyroid) from a healthy sheep, for general disease through failure of his patient's own throat gland, that Dr. George Murray, in 1891, started a new era in our

methods of cure. This extract, or the animal gland itself in small portions, when cooked, if given systematically, tends further to reduce any excess of fat in persons who are oppressed thereby, and always within safe limits.

ANT.

THE Ant, called in Anglo-Saxon "œmette," and commonly known as *Formica flava*, exercises certain medicinal properties. In the *London Pharmacopœia*, 1696, we read "Ants are hot and dry; excite lust, and by their sharp scent wonderfully refresh the spirits: the greater, or winged, with a little salt, cure the psora or scab, and leprosie."

To prepare a solution of them (*Liquor formicarum*) take winged ants, cleanse them, put them into a narrow mouthed glass, stop it, set it in brown bread in an oven, and take it out therewith, which filter and keep for use. Inwardly it causeth magnanimity, and cures the stone: outwardly it helps suffusions of the eyes, cures the itch, and dissipates corns and warts." (Armstrong in *Medical Essays* says that corns are the sprouts of rheumatism, and not the effects of mere pressure.)

The *Formica rufa*, or Hill Ant, is found chiefly in woods, with nest-hills there, and was the first to furnish formic acid, which is the basis of chloroform. Dumas discovered that the peculiar acid which these ants secrete, contains "formyle" combined with oxygen; but if chlorine is substituted for the oxygen, then chloroform is produced. By distilling the ants formic acid passes over; but this can be chemically obtained with greater ease, and economy, from starch when treated with sulphuric acid and manganese. The ants possess also a certain proportion of malic acid (the acid of apple

juice). "Ants," say Kirby and Spence, "have no unpleasant flavour: they are very agreeably acid, the taste of the trunk and abdomen being different, whilst the formic acid provokes a flow of urine." In some parts of Sweden, ants are distilled with rye to flavour brandy of an inferior sort. Formic acid is also found in certain caterpillars, as well as in the stinging hairs of the nettle, and in some other plants. It produces a pungent sensation when applied to the skin. To make a "spirit of ants," take ten parts of recently collected ants, bruised, and add thereto for a couple of days fifteen parts of alcohol and water equally mixed, then if twenty parts are distilled they will make the "*Spiritus formicarum.*" This may be given in doses of from ten to twenty drops in water three or four times a day, for gout, rheumatism, and difficulty of passing water. Also the expressed juice of ants has been successfully used as a lotion to remedy sexual impotency. Three pounds of boiling water are to be poured upon one pound of the bruised ants, and the infusion is to stand for three hours, then press out the liquor, and strain. The formic acid contained in the stinging hairs of the nettle (*urtica urens*), was commended by John Wesley to arrest bleeding, like that of an open cancer. By submitting ants' eggs to pressure, a kind of milk has further been obtained, resembling a mixture of milk and chocolate; it contains lactic and phosphoric acids, casein, albumen, and a sort of butter. Ants' eggs mixed with the juice of onions and dropped into the ear were an old Scotch certain cure for deafness. A tincture of Wood ants can be made by digesting two parts of fresh bruised ants in three parts of alcohol. It possesses a brown colour, and may be taken in doses of from ten to twenty drops. "The Russians,"

says Hudibras, "give as physic to their soldiers, 'purging comfits and ants' eggs'"; also they find the eggs of the Rose Beetle (*Cetonia aurata*) in their ant hills, which leads to the conclusion that the acid juice of the ants must bear some relation to the secretions of this Beetle. If Red ants are crushed, and the point of a lancet wetted with the concentrated acid got therefrom be used to prick a sparrow, a rabbit, or a cat, the same convulsive results are observed as when the poison of the Rose Beetle is similarly used. Their acid tincture has been medicinally administered with success in epilepsy, especially that of young subjects, the dose being two or three drops of the tincture made as aforesaid, or of a more diluted tincture. In "*A Thousand Notable Things*," we read that "a bath wherein emmets, or ants, and their eggs have been stamped, or sodden, doth quickly heal an old and almost incurable joint sickness." Robert Lovell (1661), says: "The best ants be those that live under resiniferous trees; nightingales use them when they are sick." "About the sixteenth century," says *Alchemy and Pharmacy*, "the winged ant was a favourite ingredient in love philtres, and was prepared in the form of a tincture by maceration in alcohol. This tincture dropped in the homœopathic manner into wine, or mixed with food, was supposed to have a wonderful action in arousing the tender passion, even within the coldest hearts. The winged ants alone were used in making the said acid tincture, which enjoyed a long reputation. It was subsequently known as "Hoffmann's Water of Magnanimity," and largely taken in the seventeenth century as a sexual stimulant. Sidney Smith advised a diet of red ants, which, he was given to understand, taste like pineapple.

The white ants (*termites*) are eaten abundantly by

some of the African nations. They are skinned and parched in an iron pot, whilst stirred as in roasting coffee, being served up in this state as a delicious food. The female ant in particular is supposed by the Hindoos to be endowed with highly nutritive properties. It was carefully sought after and preserved for the use of the debilitated Satjee Rao, Prime Minister of Scindia, Chief of the Mahrattas.

In this country ants are torpid during the winter; therefore the common notion that they gather food during harvest time for their winter's store is a mistaken one. Moreover, they live chiefly on animal food, sometimes eating even their own kindred. The so-called ants' eggs are in reality pupœ, or chrysalids.

"*Formicæ grata est formica: cicada cicadæ*" said Theocritus: "Birds of a feather will gather together." "*Sus sui, canis cani, bos bovi, et asinus asino pulcherrimus videtur.*"

Formic acid, whether got from the Red ant, or prepared artificially by the chemist, is highly corrosive, and causes when pure, if dropped on the skin, blisters, or ulcers. Medicinally its tincture is used (H.) of the third decimal strength for the same purpose as the Spirit of ants.

Southey in his *Common Place Book*, tells that the termites or white ants, when cakes made of them are eaten to excess, bring on an epidemic of colic and dysentery, which proves fatal in two or three hours; but the familiar Red ant is highly commended by him in another quotation as an animal simple. Savarof, addressing the Russian soldiers, bids them "have a dread of the hospital! German physic stinks from afar; is good for nothing and rather hurtful; but take care of your health; a soldier is inestimable! your messmates

will know where to find roots, herbs, and *pismires* (red ants) for your cure." Again, Southey relates the story of Schuman, a missionary among the free negroes at Surinam. He had suffered a dangerous attack of "season" fever, and lay helpless in his cot, being covered all over with boils and painful sores, whilst his only attendant was a poor old negro woman. At sunrise he saw an immense host of ants entering through the roof, and spreading themselves all over the inside of his chamber. Expecting little else but that they would make a meal of him, he commended his soul to God, and hoped thus to be released from all suffering. They presently covered his bed and himself, and, entering into his sores, caused an uncommon degree of smarting and pain. However, they soon quitted him and continued their march, and from that time he gradually recovered his health.

ASS.

THE Ass, or donkey (*Equus asinus*), is without doubt of Eastern origin, being still found wild in Asia. Its peculiar dark brown stripe down the back, crossed transversely on the shoulders, is the distinguishing badge of the race. By the Persians and Tartars the flesh of this animal is deemed excellent eating. The Greeks relished it highly; and, according to Martial, the Roman epicures considered it a dainty dish. Pliny tells that young fatted wild asses were commonly brought to the markets at Rome for sale as food. Bartholomœus Anglicus (1250) said, "The ass is fair of shape and disposition, while he is young and tender, ere he pass into age, for, the older the ass is the fouler he waxeth from day to day, and hairy, and rough, and is a melancholy beast that is cold and dry; and is

therefore kindly heavy, and slow, and unlusty, dull, and witless, and forgetful; and dieth at last after vain travails, and hath no reward after his death for the service and travail that he had living—not so much that his own skin is left with him, but is taken away, and the carrion is thrown out without sepulture, or burials." Quoth the *Comic Latin Grammar:*—

> "Pomarii asinus duram servit servitutem."
> "A Costermonger's donkey leads the life of a slave."
>
> "Poor Animal! a *sterne* heart was once melted by thy sufferings;
> How then must they affect that of the *gentle* reader?"

According to a Cornish cure for whooping cough, the child was to be drawn naked nine times over the back and under the belly of a female donkey three years old, on three mornings running. Three spoonfuls of milk were also to be taken from the teats of the animal; whilst three hairs were cut from its belly and back respectively, to be put into the milk. This was to stand for three hours, and then the child had to drink it in three doses. Some doggerel lines were connected with the ceremony, to the effect that as Christ placed the cross on the ass's back when He rode into Jerusalem, and so rendered the animal holy, if the child touched where Jesus sat it should cough no more; and a cure was always effected.

Hippocrates commended the Ass as a refined food; but on the contrary, Robert Lovell, in 1661, spoke about the flesh as "of very bad juice, hardly concocted, hurtful to the stomach, and unpleasant to the eater." The late Dr. John Beddoes of Clifton, wishing to try if the flesh of the Ass were savoury, invited a party of medical students to dinner, the principal dish being the hind quarter of a plump young donkey. This was supposed

to be part of a fawn, and was highly relished, several of the guests asking for a second helping; it being thus shown that only prejudice prevents the flesh of the Ass (which is not a carnivorous animal) from being added to the contents of our butchers' shops. "If you have nothing better to do," wrote Mr. Bicknell to Jeaffreson, after the banquet of horse flesh at the Langham Hotel, February, 1868, "come to me, and dine off donkey" (two years old, and killed six days before), which proved a great success. The middle cutlet from the loin was found to combine the texture of the finest mutton with the flavour of roast pig. "In Buda Pesth, the Magyar can eat his salami made of asses' meat, drink his soup flavoured with red hot pepper, enjoy his sweets, and then toss up with the vendor to decide whether he shall pay double or nothing."

The milk of the Ass in particular has in every age of physic from the time of Hippocrates to this day been esteemed the sheet anchor in preserving patients affected with pulmonary consumption from the most alarming symptoms.

Of the four milks—human, cow, ass, and goat—that of the Ass contains the smallest amount of solids, but is more rich in sugar than the rest, except the human milk. It is poor in curd and fat, being therefore light, sweet, and easy of digestion, whilst specially well suited for persons whose stomachs are too delicate to digest cow's milk easily. In convalescence from acute maladies, in consumptive cases, and in chronic diseases of the digestive órgans, asses' milk is a very valuable aliment, depending beneficially on the small amount of butter, and the large quantity of milk sugar which it contains. An artificial asses' milk may be extemporised by dissolving a couple of ounces of sugar of milk in a

pint of skimmed cows' milk. Human milk and that of the Ass are alkaline.

In the *Rich Storehouse*, 1650, we read, "A good medicine to be used by one that is in a consumption": "Take a bottle of rose water, and as much asses' milk, if it may be gotten (or else the milk of a cow that is all of one colour), and put therein the number of fifty or sixty hen eggs that are new laid, temper the yolks and the milk and the rose water well together (but let none of the whites remain among them), and distil a water thereof, and drink it first in the morning and last at night warm, with a cake or two of *Manus Christi* (Pearl sugar), which is made of gold or pearls. Use this and you shall find great comfort by it; this hath holpen many."

In Dr. Salmon's London *Pharmacopœia*, 1696, asses' milk is called "alexipharmick, and nourishing, and cleansing; it helps in consumptions and diseases of the lungs"; and by one of the best modern writers on the pathology of pregnancy, it is now commended as an important article of diet during that state.

The occipital bone of an ass's head is said in Worcestershire to be a good periapt or medicine, which being tied about the neck is believed to expel disease. Likewise in Africa and Egypt, to avert the evil eye it is usual to put up the head of an Ass, or some bones of this animal. In Derbyshire the donkey is "yawney box"; in Dorsetshire "nirrup," and "rantipike"; in Lincolnshire "jazzup"; in the Isle of Wight "nutten." The life of the donkey is from thirty to forty years.

Among *A Thousand Notable Things*, 1815, it is told that, "The skin of an Ass being turned, and shoes made of that part of the hide whereon the burdens did lie that the Ass carried, they will never wear, nor become worn,

no, although you do go continually among stones and thorns, and with the oldness thereof they will wax hard that one cannot suffer to wear them."

In the Desert of Arabia, the post of honour is always filled by a donkey, who invariably leads the caravan, the camels refusing to move except under his guidance. It is said that among the Romans, rich women bathed themselves "in asses' milke; some in the milke of five hundred she asses at once."

During the early stages of consumption, when costiveness of the bowels is often a difficulty troublesome to be overcome, the laxative quality of asses' milk renders it particularly useful, especially if some pulp of sweet prunes, or of cassia, be added.

The Poet Hood in his *Ode to Rae Wilson*, gives some humorous lines about a village in which only one pair of grown donkeys existed, and the she Ass, on whom a consumptive girl was depending for milk, had just died:—

"No matter: at the usual hour of eight
Down trots a donkey to the wicket gate,
With Mister Simon Gubbins on his back;
'Your sarvint, Miss! a wery spring-like day!
Bad time for hasses, though! good lack! good lack!
Jenny be dead, Miss! but I'se brought ye Jack;
He doesn't give no milk; but he can bray.'"

Moral:—

"Some Saints would sneer at Gubbins for his blindness;
But what the better are their pious saws
To ailing souls, than dry hee-haws
Without the milk of human kindness?"

Also, the Spaniards have a rhyme, which runs thus:—

"And, doctor, do you really think
An ass's milk I ought to drink?
It cured yourself, I grant 'tis true;
But then, 'twas mother's milk to you!"

A stone extracted from the wild Ass was esteemed in former times a cure for epilepsy, and made its possessor

invincible in the field: taken with wine it drove away quartan ague.

The slang phrase of street acrobats, "Two pence more and up goes the donkey," which signifies something which is beyond their powers and not to be done, is really a rabbinical expression, similar to which in its meaning is the Roman saying, "*Cum asinus in tegulo ascenderit.*" Though stupid and obstinate, the Ass sets mankind a good example in one respect, that of being very choice in the water he drinks.

BADGER.

About the Badger (brock) *Sextus Placitus*, "*Medicina de Quadrupedibus*," 1538, wrote, "Catch that four-footed neat which we name 'brock' in English, and do off the teeth from him while yet alive, those which he hath biggest; then wind them up in a linen garment, and work them in gold or silver, that they may not touch thy body; have them with thee: then shall scathe thee neither heavenly body, nor hail, nor strong storm, nor evil man, nor shall the touch of any evil damage thee. Seethe his brain in three sextarii of oil in a new crock till that the third part be boiled away; bottle off and preserve it. If any one be troubled with head-racking pain, smear him therewith for three nights, he will be healed." (This primitive method closely relates itself to the modern scientific theory of giving *Cerebrinin*, the brain substance of a healthy sheep, for troubles within the human head.) "Have fell pieces of his hide on thy shoes, thou shalt never feel distress in thy feet, thou holiest Cæsar! I would that thou shouldest believe that this wild brock benefits well if thou, on thy cleansing days where thou travellest, eateth his flesh sodden, and partakest of it; it shall be good to thee, and to thy hosts."