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."

The Badger (*Meles taxus*) is said, by Professor Owen, to be the oldest known species of mammal now living on the face of the earth; but it becomes more rare year after year. The head is pointed, the legs are short, and the body is clothed with long coarse hair. It is a nocturnal solitary animal, seeking its food of mice, insects, and roots by night. Its colour is ash-grey, and black below. The flesh of the Badger is said to be savoury. By the Germans and French badger hams are eaten with relish, whilst the Chinese esteem a fatted badger to be a dish fit for the feast of a mandarin, if not for the Brother of the Sun himself.

But nevertheless the animal gives forth a disgusting odour, so that to "stink like a badger" has become proverbial! The hair of the creature forms excellent brushes for painters. Dr. Salmon, 1696, said of the Badger, "The testicles in powder eaten with honey stir up lust, and cause conception." This again is in accord with the recent practice of giving a sound animal testicular substance, as bearing curative reference to the sexual function at fault in the corresponding human organ.

W. Browne (*Britannia's Pastorals*, 1613) makes special allusion to the inequality of the badger's legs:

> "And as that beast hath legs—which shepherds feare
> 'Ycleep'd a badger (which our lambs doth teare),
> One long, the other short—that when he runnes
> Upon the plaines he halts; but when he wonnes
> On craggy rocks, or steepy hills, we see
> None runnes more swift, nor easier than he."

Still, it is a vulgar error that the legs of a Badger are shorter on one side than on the other; though Lord Macaulay says: "I think that Titus Oates was as uneven as a badger."

BEAR (*see* MISCELLANEOUS).

BEAVER.

THE Beaver, Castor Fiber (*a castrando*, because castrated), is one of the Rodentia which furnishes an animal product—Castoreum—as imported for medicinal uses from Russia and America, chiefly from the Hudson's Bay territory. This is a secretion derived from the prœputial sacs of the Beaver, male and female. It is a dry, resinous, reddish-brown substance, highly odorous, soluble in ether, and to a great part in spirit of wine. The Ancients supposed that the drug was lodged in the testicles of the male, and that the animal when hard pressed by hunters would bite them off, and leave them to his pursuers. Said Fuller, 1660, "Some will have him called 'Castro,' *a castrando se ipsum*, and others adde that having formerly bitten off his stones he standeth upright and showeth the hunters that he hath none, that so they may surcease their pursuit of an unprofitable quœre. The plain truth is his stones are so placed in his body, as those of the boar, that it is impossible for himself with his teeth to touch them. And some maintain they cleave so fast to his back they cannot be taken away without loss of his life."

Juvenal wrote in his *Satires* (book xii, verse 34) of the Beaver :—

> "Eunuchum ipse facit cupiens evadere damno
> Testiculorum ; adeo medicatum intelligit inguen."

> "Emasculates itself, content to cast
> Its odorous orchids on the hunter's path,
> Staying thereby his course, and saving thus
> Its barren life, at cost so keenly felt,
> Of future seedlessness

Again :—

> "Ut vivat Castor, sibi testes amputat ipse ;
> Tu quoque, si qua nocent, abjice; tutus eris."

> "The Beaver bites off 's stones to save the rest,
> Do thou the like with what thou art oppres't."

Castor is a powerful antispasmodic remedy; it gently stimulates the nervous energies, and quiets spasm when given in small doses, for which reason this is a useful medicine against hysteria, as likewise in low forms of fever.

It exercises a specific influence on the womb, promoting the monthly flow, and relieving nervous disturbances connected therewith. From five to ten grains of powdered Castor may be given for a dose; also a tincture, and an ammoniated tincture are officinally made, of which from fifteen to twenty or thirty drops may be given with two tablespoonfuls of cold water every few hours. Castor consists of a mucilage, a bitter extract, a resin, an essential oil of the characteristic odour, and a peculiar principle known as *Castorine*. It further contains salicine, and several fats. For intestinal flatulent distension it does good service, as well as for hysterical tremblings and twitchings. The Beaver excretes so little phosphorus in its urine that chemical analysis fails to detect it; whilst the female beaver has castor sacs as well as the male. Bartholomœus Anglicus (1250), said: "In their houses be two chambers, or three, distinguished, as it were three cellars; and they dwell in the over place when the water ariseth, and in the nether when the water is away; and each of them hath a certain hole properly made in the cellar, by the which hole he putteth out his tail in the water, for the tail is of a fishy kind, and it may not without water be long kept without corruption." Robert Lovell (1661) wrote about the Beaver, "Gluttons desire much the membranes that are between the toes, being betwixt fish and flesh, and they are therefore used in the time of fasting; some rost the tail, and casting a little ginger thereon serve it to the table." Fuller said: "As

physicians have their succedanea, or seconds, which well supply the place of such simples which the patient cannot procure, so otter wool is much used in the making of Beavers; the otter is as destructive to fish as the wolf to sheep; but more is required to make fine flesh than to have fine feeding; the flesh of the otter, from his innate rankness, being nought, though his diet be dainty."

Beaver hats were introduced into this country as early as the Norman Conquest. Henry III wore "*unum capellum de Bevre* (1250) *cum apparatu auri, et lapidibus pretiosis.*" On the "Marchant's hed," in the *Canterbury Tales*, of Chaucer, was "a Flaundrish bever hat." There is a Beaver's Island in the Severn, near Ribbesford.

The Beaver is able to digest cellulose. American savages obtain an oil from the tail of the Beaver which they apply as an external embrocation. Theophrastus Paracelsus (Dr. Hester, 1633), ordered "To make oyle of castoreum, take the fattest that thou can get, and stampe it well; then put it into a glasse and set it to putrifie *in balneo mariæ* five or six dayes, then distill it with a soft fire, and thou shalt have an excellent oyle. This is good against all cold cramps and palsies, being mixt with Rew (*rue*) and vinegar, and put into the nostrills it comforteth the braine, and taketh away paines of the head. Beeing annoynted on the necke, and also drunke with wine, it helpeth much those that are troubled with the falling sicknesse; it helpeth the convulsions and paines of the sinewes, if you annoynt them therewith. Being drunk with pepper and hydromell it provoketh women's termes, it warmeth cold places, is also excellent against apoplexia, it helpeth those that are deafe, it moveth venery, it cureth the

collicke and the suffocation of the matrix, and strengtheneth the natural parts." Thomas Sibbald in Canada found the testes of the Beaver bottled in spirit as an Indian nostrum for nervous headache.

BEE.

THE common Honey Bee, *Apis mellifica*, Hymenoptera, besides producing honey (of which the virtues and uses have been fully described in *Herbal Simples*), is of curative value as an animal simple by the efficacy of its sting venom. This may be best obtained by seizing bees—one by one—as they emerge in the morning from a hive in full work, and by putting them as they are caught into a clean widemouth stoppered bottle. Here they become irritated by their imprisonment, and they try vainly to sting the operator's hand through the glass. Whilst they are still enraged a few drops of chloroform should be poured into the bottle, shaking it until the bees become stupefied; then the hinder part of the body of each should be cut off with a pair of sharp scissors. These parts are to be put in a mortar, with a sufficient quantity of glycerine to cover them, the whole being carefully rubbed together, and crushed up until reduced to a pulp. The same should be bottled with spirit of wine added to three times as much as the glycerine employed, the mortar being first washed out with the spirit. After maceration for several days, during which the bottle is shaken repeatedly, the tincture should next be filtered for use. If well prepared, then if the skin be pricked anywhere by a needle previously dipped in the tincture, a red patch of blush about as large as a shilling will be produced. When taken experimentally in full toxic doses by healthy provers, the sting venom has caused symptoms

diffused over the general skin, and the lining mucous membranes, similar to those which affect the skin locally when a sting is inflicted upon it. Acting upon which knowledge the (H.) physician prescribes the venom in dilution as a medicinal tincture of great virtue for obviating erysipelas, especially of the head and face; likewise for relieving a puffy sore throat with much loose swelling about the tonsils ; also for dropsy of the limbs which has followed a chill, or is connected with passive inactivity of the kidneys. Ten drops of the tincture reduced to first decimal strength should be given every three or four hours with a tablespoonful of cold water. That kind of sore throat is specially amenable to this medicine wherein a watery swelling spreads over the tonsils with a brilliant redness, looking as if a bee had flown in and stung the sufferer there, like the sore throat of scarlet fever, and of incipient diphtheria. Again, for nettle-rash which presents the same features as those immediately following a bee-sting, *viz.*, burning, tingling, and itching of the skin, with a diffuse swelling in white and red wheals, the tincture of bee sting diluted to the second or third dilution is equally useful.

Provers of the venom have further become affected by a morning diarrhœa, which when it occurs from other idiopathic causes, the reduced tincture will arrest. Similarly for threatened or actual water on the brain, this remarkable remedy has over and over again rendered curative service.

The sting venom of bees has been found practically helpful for mitigating the pain and swelling of rheumatic gout in the hands and elsewhere: this is to be done by toxicating the tender and swollen limbs with lively bees placed over the parts in an inverted

tumbler, and then irritating the insects so as to make them sting. A custom prevails in Malta of inoculation by frequent bee stinging of this sort, so as to impart at length a protective immunity against rheumatism; such a result being confirmatory of the fact known to bee keepers in general, that after repeated exposure to the attacks of bees throughout a length of time, most persons will acquire a convenient freedom from all future disagreeable effects on being stung ever so often. An Austrian physician has based on these methods an infallible cure for rheumatism, whether subacute or chronic. Experiments have shown that it takes about four weeks of pretty frequent stinging by bees to make a person sting-proof.

In some recorded cases, the immediate sequence of bee stinging has been a short severe attack of asthmatic, difficult breathing. On dogs the venom of the Honey bee acts in the same way as the venom of the adder. German researches have detected in the bee-poison a small quantity of supposed formic acid (that of ants); but as this retains its venomous character in spite of submission to heat, it more probably partakes of the nature of an alkaloid.. Boiling water poured on newly killed Worker bees makes Bee Tea, which is found to be of assistance for a straining, painful difficulty in passing water (strangury), as likewise for dropsy of the kidneys and heart. Dried and powdered bees given in a dose of twenty grains will similarly promote a free flow of urine. The propolis, or glutinous resin of bees with which they cement their hives, yields when burnt an anti-asthmatic fume. It contains benzoic acid, such as is employed in making fragrant pastilles. This has served usefully to check diarrhœa and dysentery.

A very effectual stimulating ointment for healing

indolent sores is made from beeswax with olive oil, resin, Burgundy pitch, and turpentine. This is Basilicon (Kingly) unguent, or that of "Compound resin," and is supposed to be identical with Holloway's ointment, of widespread and lucrative repute. Bee stinging has been purposely adopted by malingerers to feign disease for purposes of imposture.

American physicians have lately reported the cure of ovarian tumours in five or six weeks by drinking a small quantity of bee tea three times a day, this being made by pouring a teacupful of boiling water on twelve live Honey bees, and letting them infuse for a couple of hours.

"To have a bee in the bonnet" is a saying which bears reference to the moon under the name of a bee at the instance of the priestesses of Ceres, so that to be moonstruck, or lunatick, implies having a bee (moon) in the head: or, it may be, a mere homely "humming." "All flies," says the *Koran*, except the Bee, "shall perish in hell fire."

Dr. Marcy, 1847, told of a lad long afflicted with dropsy of the belly and chest, who had been treated in vain by several physicians, and had been tapped, but the fluid filled up again with great rapidity. Then a strolling Indian woman suggested the use of the Honey bee each night and morning. She put some bees in a covered tin pail, and placed them in a heated oven until they were killed, and then after powdering them gave one twice each day. After about twenty-four hours there was a decided increase in the quantity of urine; and from this time the symptoms continued to steadily improve, whilst the dropsical effusions diminished day by day, and at the end of a few weeks the patient was entirely cured. The grubs of bees are relished as food

by many persons, even in this country. That "Out of the eater came forth meat, and out of the strong came forth sweetness," was the riddle of Samson when he had slain the young lion, and taken honey to eat from the carcase thereof; and the secret of his animal simple, so pleasant to the taste, was discovered to the Philistines by plowing with Samson's heifer; for bees abhor carrion, and must in this instance have been more or less symbolical! (*Judges* xiv., 14).

BEEF.

Beef, the flesh of the ox, is so relied upon as the reputedly highest form of sustenance, whether for the sick or the sound, that full consideration must be paid it as an Animal Simple. The solid portion of beef is composed of albumen, fat, creatin, creatinin, inosinic acid, muscular tissue and various salts. As a restorative in illness it is given raw, or in solution more or less concentrated; but its chief nutriment consists in the albumen and fibrin for building up the solids of the body. These elements are coagulated by heat, and therefore have to be excluded from liquid extracts of beef made to be kept. Raw meat pulp is to be obtained by scraping the soft muscle constituents from the fibre—not by mincing the meat. This, and raw meat juice, contain a large amount of proteid (an element essential for recruiting the strength), which is used up more readily than the proteid of milk. For obtaining a solution rich in albumen and meat salts (but which must be always freshly prepared), cold water should be added to the best rump steak, minced finely, one ounce of water to four ounces of meat. This should be well stirred together, and allowed to stand for an hour. The juice should be then forcibly squeezed through muslin

by twisting it. The same makes a capital material for supplying proteid to children who cannot digest an adequate amount of milk proteid. Raw meat is more quickly assimilated than cooked meat, because in the latter the albumen becomes hardened by heat; but there is always a risk of contracting parasitic diseases from it raw, because the animal parasites can only be killed by cooking. Majendie, the French physiologist, made a strong, rich soup from fresh meat, and fed a number of dogs with this soup alone, and a number of other dogs with the rejected fibrine, the result being that the dogs fed on this supposed refuse lived and flourished, whereas the others all ultimately died. Raw meat is highly extolled by some French physicians for troublesome indigestion in pulmonary consumption, especially when associated with diarrhœa. The meat is to be scraped or cut, and pounded as fine as possible; then made into small round pellets, and covered with sugar or gum, or it can be mixed with a little hot, clear soup. By being finely subdivided the fibres are made more subject to the action of the stomach-juices. Dr. Débove, of Paris, has suggested forced feeding with powdered raw meat for consumptive patients who have lost all appetite. He discovered by accident that if, under these circumstances—when food taken in the ordinary way would excite disgust, and be rejected by vomiting—this food is introduced into the stomach through a tube passed down the gullet, it will be retained, and digested, even in large quantities. As the results of such "sur-alimentation" the cough and expectoration were lessened, the night-sweats ceased, the strength and weight were increased, and a marked improvement took place in all the physical symptoms. Presently by the continued use of powdered raw meat this

principle of forced feeding became practicable without any necessity for employing the gullet tube. The powder was mixed with lentil-flour and taken as soup, or (better still!) was had with grog, as "*grog de la poudre de viande.*" Two tablespoonfuls of the meat-powder were put into a bowl with three dessert-spoonfuls of essence of rum punch, and enough milk to make a perfectly fluid mixture. By this method it was found that from fifteen hundred to six thousand grains of meat-powder would be taken daily—the latter being equal to three and a half pounds of raw meat. Dr. Débove gave it also simply mixed with milk, first adding just enough to make a smooth paste, and then mixing in the remainder so as to prepare a uniform fluid easy to be drunk. It may be fairly supposed that by such a course of action the patient acquires a power of resisting the disease, and the bacillus or special microscopic germ of consumption finds a soil made hostile to its culture by this excess of food. For preparing the powdered raw meat lean beef was taken, and when cut up into small pieces dried in a water bath; then, after thorough drying, reduced to powder in a coffee mill. (See Dr. Yeo: *Food in Health and Disease.*)

Liebig's famous "broth for invalids," 1854, consisted of half a pound of chopped fresh meat macerated for an hour with a pound of cold water, to which four drops of hydrochloric acid (as representing the stomach juices) were added, together with from thirty to sixty grains of table-salt. This was then strained, and a pound of clear, red-coloured liquid was obtained, which comprised all the albuminoids of the meat held in solution. The same liquid when evaporated has been since made into an "extract (Liebig's) of meat," and transferred to glazed stoneware jars carefully covered. Liebig

expressly declared it to be incapable of promoting actual nutrition, but taught that it should be rather classed as a nervine restorative, together with tea, coffee, and perhaps alcohol. Both this and beef tea have no true claim to perform the function of a nutrient, whilst, without doubt, they act as temporary cordials, and nervine stimulants; but to regard them as substitutes for food would be quite a mistake. More especially are they suitable in febrile ailments when nature protests against the use of substantial food by the repugnance thereto of the patient, and by the increase of fever which it induces Good extract of meat (such as Liebig's) usually contains from nine to ten per cent. of nitrogenous ingredients—as afforded by the creatin, the globulin (the urea), and sometimes the gelatin included. Beef tea comprises salts which are important as mineral food, especially the chlorides and sulphates of potash.

If meat is taken in excess of the digestive powers so as to be detained in the body and thus to undergo putrid changes, the corrupt products become absorbed into the blood, causing sleepiness, lassitude, and general indisposition, with vomiting and purgation occasionally.

Aretœus of old (*tempore* Adrian), enjoined that in epilepsy the patient should be entirely restricted from taking flesh meat; which cannot but be regarded as a direct stimulant to the nerves and the blood vessels. Savages eat enormously of meat; yet Wrangle says (as quoted by Herbert Spencer), "I have repeatedly seen a Yakut or a Yongoshi devour forty pounds of meat in a day; nevertheless the savage is less powerful and enduring than the civilized man, he is unable to exert suddenly as great an amount of force, or to continue the expenditure of force for so long a time." The word "meat" means really food in general, and not

exclusively animal food. In Psalm civ. *v.* 27, it is said of fishes, creeping things, and crocodiles that "God giveth them their meat in due season."

A Cornish cure for warts is to steal a piece of meat from a butcher's stall in the public market, so as to touch the warts with this and then bury it.

Byron says in *Don Juan*, "The best of remedies is a beef steak against sea sickness; try it, sir, before you sneer. I assure you this is true, for I have found it answer: so may you." In the *Regimen Sanitatis*, edited by John of Milan, and dedicated by him, on behalf of the School at Salerne, to Duke Robert, the eldest son of William the Conqueror, occurs an aphorism which (translated) runs thus, in allusion to the said affection —

> "Sea-water drunk with wine doth well defend thee,
> If on the sea, casting (sickness) chance to offend thee."

For delirium tremens, Dr. Stacey Jones of Philadelphia gave "beef tea, red hot with cayenne pepper, in copious draughts, and so strong that you would not care to taste it; yet the patient would declare it the most cool and refreshing drink." And a London surgeon has reported a hundred and fifty successive cures thereof with this remedy alone.

In Shakespeare's play of *Twelfth Night*, Sir Andrew Ague-cheek says to Sir Toby Belch: "But I am a great eater of beef, and I believe that does harm to my wit." Nutrient suppositories of beef (predigested by the solvent principle of the stomach-bread, as supplied by the chemist) are highly useful as a food to be introduced into the lower bowel, and absorbed there, when, through disease or accident, meat cannot be swallowed or digested in the stomach. The juice of the Papav tree, if a small quantity of it is rubbed upon meat, makes

it tender without injuring the quality. It is used for this purpose in the West Indies.

Raw beef sandwiches may be given in cases of great debility, prostration, or bloodlessness,—to make which slice thinly some raw, lean beef, then scrape it and serve between thin pieces of bread and butter, adding a little sugar or honey to disguise the taste. A sandwich may be taken between meals, or during the night if wakeful.

Hufeland declares about meat-eaters that all carnivorous men and animals are violent, cruel and passionate; whilst, on the other hand, the use of fish, milk, and vegetable food inclines men more to mildness, humanity, and longevity. Even our domestic animals advertise their food in their faces, and anyone can tell a butcher's dog as far as he can see him. "The Pampas Indians have nothing but water and beef, beef and water, from the cradle to the grave."

Veal, the flesh of a calf, "keepeth green wounds from swelling." So taught Robert Lovell (1661); whilst an Italian proverb runs to the effect that, "*Vitello, pollastro et pisce, crudo ingrassano i cemetrii*"; "Raw veal, pullet, or fish help to make the churchyard rich." Charles Lamb, in *Grace Before Meat*, avowed himself as shrinking instinctively from one who professes to like minced veal. But in England this meat is whiter and more bloodless than on the continent, where it finds better favour as a light, nourishing, digestible food. We kill it too young, and bleed it too much before killing; consequently we find it less digestible than beef or mutton. It contains a larger proportion of gelatine than beef. "The marrow of the calf," wrote Dr. Salmon, "softens hard tumours; the gall is very good against the leprosy, and kills nits and lice." Because

of its abundant gelatin in solution veal broth is very nutritious, by promoting gastric juice, and sparing the albumen, as Dr. Yeo teaches. It is given in France rather as a tisane, or invalid tea, than for nourishment. That "quey caufs (female calves) are dear veal," says an old Yorkshire proverb; whilst Fuller quotes another: "As wise as Waltham's calf that ran nine miles to suck a bull."

BEETLES.

THE use of Scarabs, or beetles, as amulets against sickness and misfortune, dates from the most ancient periods of Egyptian history. They were natural objects, or made of lapis lazuli, cornelian, or steatite, and were buried with mummies, having reference to the resurrection of the dead. Beetles were believed in old days to be generated by the sun; but Burton, in his *Anatomy of Melancholy*, speaks of them as "*E stercore orti, e stercore victus, in stercore deliciam*"; and Macbeth talked of "the shard borne beetle, with his drowsy hums"—"sharn" being the common name of cow-dung in the north. They may be said to wear their bones outside (or, like Sidney Smith, "sit in their bones"), because they have no internal skeleton, or bony frame.

The Oil beetle, *Meloë majalis* or *Pro-scarabœus*, is common in England, being found frequently during the spring creeping slowly in our meadows and pastures, or feeding on the leaves of the violet, the anemone, and other species of Ranunculus. It emits, when handled, a yellow, acrid juice from the joints of its legs, of which or of the fresh insect, a medicinal tincture is made (H.). This orange-coloured, acrid, oily fluid is a powerful rubefacient, and was formerly famous as an embrocation for relieving chronic rheumatism. It has been likewise

commended as a diuretic in dropsies, and, by the Germans, as a remedy for hydrophobia. Frederick the Great purchased the secret of this nostrum from its discoverer for a valuable consideration, to cure that dire disease. Professor Christison, in his book on poisons, gives an account of four persons who took the insect powdered, from a quack, two of whom died within twenty-four hours with severe symptoms of choking, difficult breathing and vomiting. Nevertheless, Uncle Toby, in *Tristram Shandy*, "loved beetles and flies."

The Oil beetle is recognized by its dark violet sheen, and its oval elytra, which are so short that they do not cover more than one-third of its body. "The poor beetle that we tread upon," says Isabella to Claudio, "in corporal sufferance finds a pang as great as when a giant dies" (*Measure for Measure*).

Beetles were eaten by the Roman epicures in order to fatten their bodies; and the Turkish women, with the same object, have them served at table in butter. Many of the Ground beetles defend themselves by discharging an offensive fluid of a dark colour, which probably possesses remedial qualities allied to those of the Oil beetle. The Bombardier (*Brachinus crepitans*), when pursued by an enemy emits from the end of his abdomen a small quantity of a liquid so exceedingly volatile that it immediately vaporises with a slight explosion. Meal worms, familiar to everyone, are the larvæ of a small beetle (*Tenebrio*), which, again, the Turkish ladies devour in large quantities for the purpose of acquiring the plumpness of form their lords admire so much.

The Stag beetle (*Lucanus cervus*) feeds on the juices of plants, and though looking formidable is quite lamb-like in disposition, rarely using its great strength of

jaw for the injury of other insects. It may be often taken on the wing during the evening of a warm, fine day. The larva of this beetle was the famous Cossus of the ancient Romans—a delicacy diligently sought after by their epicures, who considered the grub "one of the most exquisite of luxuries." The Stag beetle remains dormant in the earth during the winter.

Again, the common black Cocktail-ocypus (*Brachelytra*) or Devil's coach horse, has the power of throwing out a most disgusting odour, which is penetrating and persistent to a degree. Its medicinal character and uses invite experimental enquiry. Of the Brachelytra, tells Kirby, "one species which I have taken smelt precisely like a fine high scented pear; another like a water-lily; a third like water-cresses; and a fourth like saffron." The food of the Stag beetle is always liquid, consisting mostly, if not wholly, of vegetable juices. "Sometimes the Oil beetle and other insects of its genus, especially the males, are used," says Wood, "by unprincipled druggists to mix with the true blister fly, which they much resemble."

Old writers told of another beetle, which proved fatal to cattle when swallowed by them in the grass, and which was called Buprestis. Thus Nicander is supposed to say :—

> "When cows or calves are sick, and bellies swell,
> They've ate Buprestis keepers know full well."

Many farmers believe it causes cows to cast their calves, though the precise beetle has not been identified. Linnæus applied the name to the Skipjacks ; but the Buprestis, in its larval state, feeds only on grasses, so this is wrong. There is a Pill beetle (*Byrrhus fasciatus*), with a round body like a bolus ; but it is a carrion feeder, and has not been put to medicinal uses. The common Tiger beetle diffuses a strong odour like that of a

crushed verbena leaf. The Stag beetle, when in captivity, will eat sugar with eagerness. A medicinal tincture is made (H.) from the Colorado beetle, or Potato bug (*Doryphora Decimlineata*). The Bloodynosed beetle (*Timarcha lævigata*), or "Black Bob," ejects a blood-red fluid when irritated, corresponding to that of the Oil beetle medicinally. Boys in Guernsey when they catch this Blood beetle invoke it thus: "*Pàn! Pàn! mourtre mé ten sang, et je te dourai de bouan vin blanc*"—first placing it in the palm of the left hand.

When a Donegal peasant's child is suffering from whooping cough the anxious mother will go out in the evening in the hope that a beetle may fly against her and be caught. If this turns out as she wishes (and the beetle must not have been looked for), it is put into a bottle and carried home: as it dies the cough will go.

The Rose chafer (*Cetonia aurata*), or Copper beetle, is green, handsome, and round, being of the Stag-beetle kind, and found nestling in roses. Dr. Laville writes, "Everyone knows that the powder of this animal has been employed with success for rabies." M. Mostchoulsky verified the fact, in 1846, in the case of one of his dogs bitten by a mad dog; and, in 1847, with respect to two children who were likewise bitten. He made some direct experiments with the beetle. A sparrow pricked with a lancet which had been plunged into the body of a Rose beetle caught in an ant-hill, died in six minutes, convulsed by epileptic rabies. A rabbit, treated in the same way, lived only thirty-five minutes. With the poison of a beetle taken from a rose bush, death occurred in half the time. A cat, after having bitten a sparrow killed with the beetle, uttered a shrill cry, leaped into the air, and was seized with epileptiform convulsions, in spite of which she kept running and writhing; she

became rabid, biting and tearing all before her. At last she grew calm, and slept for twenty hours. A tincture is made (H.) of this beetle, the dose of which, for rabies, is from four to six drops at frequent intervals until sleep follows: a less dose for epilepsy.

BEZOAR STONE.

In the gall-bladder of the stag and other ruminants are occasionally found biliary concretions, or "bezoars," to which many virtues have been problematically ascribed. The name was given originally by our forefathers to the animal which produces one of these stones in its stomach; and a high value was formerly set on the stone, which was sold for a considerable figure. It was found at first likewise in the maw of goats which were wont to browse on a certain shrub in the kingdom of Golconda. The peasants, by feeling about the goat's belly, could tell whether or not it contained any Bezoar, and, if so, what was the size of the stone. Such productions occur also in the stomachs of cows. By the Jews this concretion was called "*Bel Zaard*," or the "overcomer of poisons." It used to be thought preservative against pestilential disorders, also curative of smallpox, measles, and other such infectious diseases; being given, too, for vertigo, epilepsy, palpitation of the heart, jaundice, colic, dysentery, gravel, to induce labour pains, and against poisons—the dose being from four to twelve grains. Lemery said, "it contains in it some small matter of volatile salt, that is sulphurous and oily, which is esteemed as a great cordial." The Indians do seek after this stone with much industry, using it as a great preservative against poison, infusing it for some time in wine or water, and then drinking the infusion before meals. Some have fastened these stones on gold chains

so as to suspend them for a while in any liquor; others have kept them in small golden boxes. The oriental, or occidental, Be(n)zoar was always in best repute. Badaga nursing women administer now-a-days to a flatulent baby asafœtida, mixed with a certain sacred confection taken from the entrails of a bull, and similar to the benzoar stone so famous in the middle ages. Pomet writes, "There is sometimes found in the bladder of oxen a stone of the shape and colour of the yelk of an egg, that is soft and of divers crusts like the Bezoar, for which reason it is called the 'Ox Bezoar,' or the 'Gall stone'; and it seems to exercise similar virtues. The horns, likewise, and the hoofs of the ox are named by some the English bezoar—a powder being rasped from the horn much exceeding the truest and best of the bezoars. It is of singular use in the falling sickness, fits of the mother (hysterics), convulsions, palsies, and lethargies." In *Precious Stones: Their History and Mystery* (William Jones, 1880), it is stated that the Bezoar, or Beza, was a stone procured from the kidneys of the Cervicabra—a wild animal of Arabia, —and was supposed to have been formed of the poison of serpents, in combination with a counteracting matter secreted by the animal itself. This bezoar was a reputed potential charm against the plague and poison, and hence came its name, from the Persian, "*Bad-Zahr*," "expelling poison."

Similar concretions of various kinds are still found in the stomachs of our grass-eating quadrupeds, usually having for their nucleus some small indigestible substance which has been swallowed at first. In a Royal Warrant (1623) to the Duke of Buckingham, mention is made of "one great bezar stone, sett in gould, which was Queene Elizabethe's," and "one other large Bezar

stone, broken in peeces, delivered to our owne hands by the Lord Brooke." Another medicament which was just as problematical, but was nevertheless practically used by our forefathers, was the horn of the unicorn.

This animal, though still taking a proud place on the Royal Arms of England, is now thought to be more or less fabulous. But James the First substituted the unicorn as one of the supporters of the Royal Arms of Scotland instead of the red dragon of Wales, introduced by Henry the Seventh.

Gesner, in his *History of Animals* (1565), wrote, "The unicorn and lion are always like cat and dog; and as soon as the lion sees his enemy he betakes him to a tree." Pomet, chief druggist to the French king (1712), states, "The Unicorn is an animal which our naturalists describe under the figure of a horse, having in the middle of his head a spiral horn of two or three feet long; but we know not the real truth of the matter to this day." In *Spenser* also we read of the "rebellious Unicorn."

The horn, from whatever source it may have been obtained, was formerly held in high esteem because of the great virtues attributed to it, especially against poisons.

That there was such an animal with one horn, most of the old writers agree. "It can scarcely be doubted" (*Mystery of Pharmacy*), "that most of the horn employed medicinally was procured from the narwhal, or Sea unicorn." It possessed, one would suppose, the same antacid cordial properties as our modern hartshorn, being given, chiefly in jelly, as a restorative. A familiar rhyme of remote nursery antiquity tells how :—

"The lion and the unicorn
Were fighting for the crown;
The lion beat the unicorn
All round about the town."

Quite right, too, and what was to be expected! But why, we wonder, did

> "Some give them white bread,
> And some give them brown?
> Some gave them plum-cake
> And sent them out of town."

Perhaps even in those early days the British lion, flushed with victory, became too much elated and a bit of a nuisance!

Again, Culpeper says (1620), "If a beast be troubled with a cough, or have taken any poison, the country people bore a hole through the ear of the beast, and put a piece of the root of Green Hellebore (*veratrum viride*), therein, which helps him in twenty-four hours."

BLACKBIRD (*see* MISCELLANEOUS).

BLOOD.

It is well known that Moses in the Levitical law forbade the Israelites to drink the blood of animals which they killed for sacrifice or food: "Ye shall eat no manner of blood, whether it be of fowl or of beast, in any of your dwellings. Whatsoever soul it be that eateth any manner of blood, even that soul shall be cut off from his people" (*Leviticus* vii. 26, 27). "Only be sure that thou eat not the blood: for the blood is the life; and thou mayest not eat the life with the flesh. Thou shalt not eat it; thou shalt pour it upon the earth as water" (*Deuteronomy* xii. 23).

But since the Mosaic times blood, human and animal, has found many medicinal prescribers. Even now-a-days the aborigines of New South Wales feed those who are very ill, and prostrate, with blood drawn from the veins of their male friends. This is taken raw by the invalid, or sometimes slightly cooked by putting

hot ashes into it. The natives willingly bleed themselves till they are weak and faint, for the benefit of their sick neighbours. Leprosy is believed, in China, to be curable by drinking the blood of a healthy infant.

Dr. Macarthy and Staff-surgeon Rennie were present lately at an execution in Peking, when they saw the executioner soak up the blood of the decapitated criminal with large balls of pith, which he preserved. These would be dried, and sold to the druggists under the name of "*shue-man-tou*," or "blood bread," which is given for a disease supposed by Dr. Rennie to be pulmonary consumption. Human muscles are likewise thought there to be a useful medicine for the same disease, and cases are constantly recorded of children who mutilate themselves to administer their flesh to sick parents. Human blood, when drank fresh, has been long supposed to be anti-epileptic. Kerchiefs dipped in the blood of King Charles the Martyr were found to be as efficacious as his royal touch (when living) to cure the king's evil. "Was not a girl of fourteen or fifteen years of age, who lived at Deptford, cured thereby in 1649? All physicians had been in vain, and the girl had become quite blind; but at the touch of the kerchief stained with the kingly blood she at once regained her sight." Hundreds went to see this "miracle of miracles." In October, 1876, it was related by Dr. Francis Vacher, medical officer of health at Birkenhead, that patients then resorted every morning to slaughter-houses in Paris for drinking the still fuming blood of animals slaughtered for the table. He suggested a use of the serum (or thin part of the blood) in England as containing most of the curative and nutritive properties of the blood itself. He knew that such serum was held in high repute by the journeymen-

butchers as a tonic in scrofula, and almost a specific against intestinal worms (thread worms, and round worms, but not tape worms). He had supplied it in bottles to his professional friends, who employed the same as a vermifuge (worm-destroyer), and as a substitute for cod-liver oil, giving, in the former case, as a dose one tablespoonful or more to children whilst fasting, and similarly two tablespoonfuls to an adult. The serum was of necessity to be perfectly fresh and sound, since any decomposition would be quickly revealed by the smell. As medicinal food, from two to three tablespoonfuls might be taken twice or three times in the day.

A comparatively recent American publication contained the following information :—" Blood is becoming the fashionable beverage in Cincinnati, being a great remedial draught for invalids suffering from bloodlessness and general run down." The *Cincinnati Commercial* has described a place in John Street where, between two and four o'clock in the afternoon, ladies congregate and drink blood fresh from the slitten throats of bullocks. They seem to enjoy it, though this is said to be not altogether conducive to health ! At the slaughter-houses in that city the East River consumptives may be seen almost any day drinking the life-blood of steers ; but as yet the custom has not become so favoured with us as it is said to be in Cincinnati.

The blood of oxen contains not only albumen, fibrin, and other nutritive elements, but also urea, creatin, and other effete substances, more or less injurious, resulting from the disintegration of the tissues destined to be cast out of the system. Though, according to M. Boussingault, of all nutritive substances the blood of animals contains the greatest quantity of iron ; and,

whilst varying in different animals, this is found as regards physiological conditions in certain fixed proportions in the blood. But experimentally the blood of snails contains as much iron as that of the ox or calf, though this is colourless blood, which goes to prove that the red colour of the blood is not due, as is generally supposed, to the presence of iron in that liquid.

When left to itself blood coagulates, forming a clot (cruor), which separates from the liquid yellow portion called *serum*. The clot consists of the fibrin which has become insoluble, and of the blood globules; whilst the liquid serum is chiefly a solution of albumen and salts. "Bullocks' blood is now (1872) in vogue among the Parisians for anæmia, and pulmonary consumption. It is a curious sight to view the number of patients of both sexes and of all ranks and ages who flock to the slaughter-house every morning. Young ladies take the blood eagerly, and I have heard them say they prefer it to cod-liver oil. I know personally of several cases of anæmia which have been cured, and some of lung consumption greatly benefited by this treatment. For the more fastidious a pharmacien has prepared an extract of blood which is given in the form of pills, each weighing about three grains, and said to represent half-an-ounce of pure blood." "Cakes of coagulated blood were sold openly in the Roman market as food a few years ago; and it is well known that in the steppes of South America the natives have for a long time used as food the blood of animals they killed in the chase, first coagulating this, and seasoning it with various condiments." An early writer says, "Among the parts of the body used as medicine in the seventeenth century, was human blood, on which some early physicians set great value for the cure of epilepsy and

diseases of the brain." Charus, in his *Royal Pharmacopœia*, orders, "In the month of May take a considerable quantity of healthy young men's blood (let blood in that season, who are not red-haired). This blood is to be distilled twice, or spread on plaster, and dried in the sun, or in an oven." All writers extol the volatile salt of man's blood for the cure of epilepsy, "it being also very proper to suppress vapours that arise from the stomach and spleen." The saline constituents of blood are phosphates of lime and magnesium, with chlorides, sulphates, and phosphates of potassium and sodium.

In 1850, Professor Mauthner, the well-known and able physician of the Children's Hospital at Vienna, recommended for the chronic bloodlessness of the young an extract of bullock's blood, prepared by straining the fresh blood through a horsehair sieve, and evaporating it to a complete dryness in a sand bath. This extract, when pounded in a mortar, forms a dark-brown powder, void of taste or smell, and of which from twenty to sixty grains are to be given for a dose. In scrofulous cases the "extract of ox-blood" proved superior to all other tonics. Nevertheless there was a story current in ancient times that Themistocles (449 B.C.) poisoned himself with bull's blood. At the present day we are aware that a hundred and fifty years ago prussic acid began to be prepared by chemists from blood; and (as Grote asks in his *History of Greece*) "is it not probable that in primitive physic it was known how to procure the same drug likewise therefrom, though perhaps in an impure and imperfect state, and that thus was extracted from blood the deadliest of all poisons? If such a mischievous agent had then no specific name, it may well have been called Ox blood."

During prolonged starvation from shipwreck sucking one's own blood has served to maintain life. In 1860, M. Anselmier submitted animals to small bleedings, and gave them the blood as aliment by "autophagy," finding that it served to bring up the bodily caloric again above starvation point. Excessive emaciation may be allowed to six-tenths of the weight in fat subjects, five-tenths in medium, and four-tenths in quite young persons. This artificial self-feeding will lengthen the hold upon life one-half longer a time than spontaneous self-existence which goes on unaided at the time of shipwreck, or other calamity of starvation.

The author of the *Survey of Inverness-shire* says, "Before the general culture of potatoes, I have known the farmers to bleed their cattle occasionally when the pittance of meat was exhausted, and having afterwards boiled this blood until it became solid they ate it for bread with the milk of the cows, so scarce was bread."

For all manner of falling evils," the *Pathway to Health* (1664) of Peter Levens directs to take blood from the little finger of the sick man, and with it to write the following lines, thenceforth to be worn as an amulet round his neck :—

"Jasper fert Mirrham, Thus Melchior, Balthazar aurum;
Hæc quicunque secum portat-tria nomina regum,
Salvitur a morbo, Domini pietate, caduco."

In Cornwall the burning of blood drawn from an afflicted animal has been a very common mode of seeking to appease the spirit of disease ; and on the Biblical principle that a living sacrifice by fire would pacify the wrath of God, even within the last few years, a calf has been thus immolated.

A peculiar sanctity is attached, in Ireland, to the blood of the Keoghs. At Dublin the blood of a Keogh

is frequently put curatively into the molar of a sufferer from toothache. A friend in Belfast writes that his foreman knew a man named Keogh whose flesh had been punctured scores of times to procure his blood. The late Sir William Willis says that the blood of the Walches, Keoghs, and Cahills is considered in the West of Ireland an infallible remedy for erysipelas.

Nowadays chemists prepare from the blood of healthy animals a "*residuum rubrum*," or "dried residue," which contains all the active principles. It is given in those disorders which require blood salts in organic combination; also for scurvy, and its allied complaints. Likewise the "*sanguis bovinus exsiccatus*" (or desiccated bullocks' blood), is an American preparation made by freeing the blood from fibrin, and evaporating it to dryness. It occurs in blackish-red scales, which are soluble in cold water. They may be given powdered, or mixed, one part in eight, with tepid water, adding a little glycerine to preserve the mixture, whilst prescribing it in tablespoonful doses. Also this solution may be employed as a nutrient injection for the insane. The desiccated blood-powder gives water a magnificent red colour. It has been well tried at the Children's Hospital in Paris, and has proved most efficacious in cases where reconstituents were needed, such as iron, raw meat, and the phosphates. M. le Bon reduced bullocks' blood by simple evaporation to a solid which, when powdered, was insoluble, and indigestible even by pepsine; but by evaporation at a low temperature, not exceeding that of the body, a powder was produced which was readily soluble in water.

"There was," says Southey, "a water of man's blood which, in Queen Elizabeth's day, was a new invention, whereof some princes had very great estimation, and

used it for to remain thereby in their force, and, as they thought, to live long." They chose a strong young man of twenty-five, dieted him for a month on the best meats, wines, and spices, and at the month's end they bled him in both arms as much as he could "tolerate" and "abide." They added a handful of salt to six pounds of this blood and distilled it seven times, pouring water upon the residuum after every distillation. An ounce thereof was to be taken three or four times a year."

Burton tells us that Burgravius, a disciple of Paracelsus, specified a lamp to be made of man's blood, as "*lucerna vitæ et mortis index*," which "being chemically prepared for forty days and afterwards kept in a glasse should show all the accidents of life." "*Si lampas hic clarus, tunc homo hilaris, et sano corpore, et animo; si nebulosus, et depressus, male afficitur; et sic pro statu hominis variatur unde sumptus sanguis*"; and, which is most wonderful, it dies with the party, "*cum homine perit et evanescit*," "the lamp and the man from whom the blood was taken are extinguished together."

Chemically, besides the constituents already stated, the blood contains much hydrogen, some prussic acid, and empyreumatic oil. The serum includes sulphur.

Among civilized nations the pig is the only animal whose blood furnishes a distinct article of food; mixed with fat and spices, whilst enclosed in prepared intestines, it is made into black-puddings, *apex abo*. These are eagerly raffled for by the yard at Whitsuntide in Suffolk. "A Whitsun black pudden' is summat for a man to look forra'd to," say the cottagers. It will be remembered that one came bouncing down the chimney to Darby and Joan in the well-known old nursery tale.

An ancient charm used in Cornwall for the staunching of blood was to chant over the sufferer:—

"Sanguis mane in te
Sicut Christus fuit in se!
Sanguis mane in tuâ venâ
Sicut Christus in suâ pœnâ!
Sanguis mane fixus
Sicut Christus quando crucifixus!"

Quite recently (as shown in the *Lancet*, November 28th, 1896), the value of healthy ox-blood, both arterial and venous, against crippling rheumatic diseases of the joint-cartilages has been most conclusively shown. It is given on the principle of containing all the combined secretions of the ductless glands—that is, all the various animal organic substances which serve to maintain the sum total of health. And thus whatever deficiency is existing in this sum total because of an impairment of one or other internal function by disease becomes corrected. Ox-blood is evaporated *in vacuo* by the manufacturing chemist, and the residuum is supplied in tabloids as a medicine for this highly useful purpose.

We read in *Moquin Tandon*, "*A Rome le sang encore chaud des gladiateurs etait ordonné contre diverses affections. En Egypte pour guerir les rois atteints d'elephantiasis on leur faisait prendre des bains de sang humain.*"

BRAIN.

On the principle of renewing blood-substances which have become defective through impairment by disease of this or that bodily organ, it is now on trial to amend a failure of nervous energy within the head by giving, medicinally, some of the grey matter of the brain from a healthy animal newly killed. Chemists regard this matter as a glycero-phosphorised food, containing also the stimulating properties of nitrogenous sustenance. Thus the animal grey matter has been found to exercise undoubted curative powers in melancholy, sleeplessness,

epilepsy, and other infirmities indicative of a strengthless brain. And this modern theory bears out a very old empirical practice, which was nevertheless of fruitful results in times gone by. Dr. Salmon's *London Pharmacopœia*, in 1696, directed that "A ram's brain fried, and a cake made of it with sheep suet, cinnamon and nutmeg, is good against the Lethargie, and other drowsie diseases, chiefly such as are epidemical."

Cerebrinin, or the grey matter of the sheep's brain, is being administered at present as a brain food, and a sedative to the nerves of sensation. Curative effects are attributed to it in hysteria, insomnia, and convulsive disorders. It is prepared by our leading druggists in tabloids, each containing five grains; one or more tabloids to be swallowed three times in the day. This grey brain-substance (cortical) from the sheep contains albumen and fatty matter, with eighty per cent. of water, the principal fat being cerebric acid. "But" (Dr. Yeo says), "the large percentage of fat contained in the brain of animals renders it difficult of digestion as food by weak stomachs." We find in the *Ebers Papyrus*, bearing date fifteen hundred years before Christ, that human brains were prescribed of old by the Egyptians for a disease of the eyes. The *Schola Salernitana* (1608) said :—

> "If any braines be good (which is a question),
> Hen's braynes be best, and lightest of digestion."

Great thinkers have been, for the most part, liberal eaters. "Gœthe was a vigorous performer at the table," says Lewes, his biographer, "his appetite was enormous, and he lived to see his eighty-third year." Peter the Great was an equally astonishing feeder. Dr. Samuel Johnson was a gormandizer. Charles Lamb's landlady always charged an extra sixpence when Wordsworth

dined with him, beyond the sum paid for any other of his friends. "I don't know nothing," said she, "about his being a great poet; but I do know he is a great eater." The benefits now attributed to preparations of brain-substance from animals are probably due to some phosphorous compound, which is lost by drying, seeing that brain matter contains over seventy per cent. of water. Therefore chemists say that the best form in which to give the unspoilt brain-substance is as a moist emulsion made with melted lard, and gum tragacanth, and water. Further, an element called "spermine" seems common to all the animal extracts recently prescribed for remedial purposes, and appears to give them their curative effect.

With regard to sleep, "A word of admonition is never out of place against working the young brain beyond its powers, or its endurance." "We have all at our bedsides," wrote Robert Stevenson, "the box of the Merchant Abudah, and, thank God! securely enough shut! But when a young man sacrifices sleep to labour, let him have a care! He is tampering rashly with the lock!"

BUG.

THE common bug is the *Cimex lectularius*, "Chinch," or Wall-louse. This, the Red bug of infamous notoriety, has been given, when powdered or made into a tincture, for special medicinal uses, as prescribed by American physicians. If the entire insect is thus prepared in either form, it proves potential for inducing the female monthly flow. In the *London Pharmacopœia* (1696), we read that "these insects are flat, red, and stinking; they suck man's blood greedily." Dioscorides ordered that seven of them should be taken internally for

quartan ague before the fit comes on. Schroder teaches that he has known them to be given with success for bringing away the birth, and the after-birth; their scent cures fits of the mother (hysterics). Charles Lamb in his essay, *The Old Margate Hoy*, speaks of fishes and quaint monsters, to which all that is terrible on earth

"Be but as buggs to frighten babes withal."

In the vulgar saying, "As snug as a bug in a rug," the word "rug" signifies (in the Danish) a rugged, shaggy dog. The "Bug Bible," a former edition which was so called, rendered a passage in Psalm xci. 6, as "The bug that destroyeth at noonday." Alston says about the Coriander, a common umbelliferous plant of our hedge-rows, "the green herb, seeds, and all, stink intolerably of bugs." But this creature was not common in the time of Elizabeth. The term "bug" occurs five or six times in Shakespeare's plays, but as synonymous with bug-bear, and not as applied to the Bed bug. In 1863 a family name "Bugg" was ludicrously changed into that of "Norfolk Howard." Avicenna prescribed bugs (*les punaises*) for the quartan fever, and for hysterical affections: with him began the practice of gilding pills. John Southall wrote (1730), *A Book of Buggs*,—in which he pointed out that though not one seaport in England was then free from them, in inland towns buggs were hardly known. Their disgusting odour goes off completely after death. The "B flat" is of a deep rust-red, tinged with black here and there in the abdomen. The old Roman physicians gave crushed bugs to rouse patients from lethargy. The Harvest bug (which is called in France *Rouget*), burrows under the skin of its human victim, and raises a red pustule, with much irritation, likewise with pain if this be broken or

wounded. The troublesome insect prevails only in the hot months of summer. It is an *Acarus*, and must possess medicinal attributes which should be investigated. "When in swarms it reddens the nets of warreners," says Gilbert White, "and its bite throws the men into fevers."

BUTTER.

BUTTER, made in the churn from new milk and cream, is a complex mixture of fats, casein, milk-sugar, earthy salts, and water, with small quantities of an odorous principle. When it is kept some of the fats decompose, so that the liquid fatty acids are set free and the butter turns rancid. It contains a large measure of heat-giving properties, but the flesh-forming qualities are very small. Butter may be almost regarded as an animal oil. One pound of it contains fourteen ounces of fat, and one ounce of water, with an ounce of combined albuminoids, starch, sugar, and mineral matter. It consists, chemically, of the glycerides of stearic, palmitic, myristic, oleic, butyric, and some soluble fatty acids. The fat comprises volatile and non-volatile acids combined with glycerine. The volatile acids are butyric, caproic, and caprylic. The most ancient butter of which we have any real knowledge is that known as bog-butter, which is dug up from time to time in Irish peat bogs. Two or three crocks of this butter may be seen in the Dublin Academy Museum. It looks like chalk, but retains its fatty nature, and burns like oil. Perhaps it was hidden in troublous times; or it may have been buried as cream to become converted into butter. We read in Holy Writ that butter, in a lordly dish, was one of the delicacies which Jael set before Sisera. In the *Leech Book* (Lœce Boc), which probably belonged to the

Abbot of Glastonbury, and which gives an account of the state of medicine as practised in England before the Norman Conquest, it is ordered as a remedy against lice and crabs, that old butter and quicksilver are to be mingled together in a mortar, and the resulting salve to be applied to the body. This is precisely the mercurial ointment of modern pharmacy as used for the same purpose.

Fatty acids are set free in butter by exposure to heat as in cooking, and they are badly tolerated by the stomach; though bodily fat may be formed from butyric acid unless some of the digestive ferments are in fault. Even at the present day butter is made after a very primitive fashion in some parts of Ireland by churning unseparated milk, the temperature being raised by the addition of hot water. This leaves, of course, a large proportion of butter milk, which is eagerly sought by the peasantry to serve as sauce with their potatoes, or to put into cakes instead of yeast. It was said some sixty years ago by a wise and eminent physician, Dr. Hughes Bennett, that one of the causes of the great prevalence of Consumption in this country was the high price of butter. This is certain, that the introduction of a large amount of fat into the diet of the people is of essential moment: and with Consumptive persons fats, such as cod-liver oil, cream, and suet, are very beneficial. *Theophrastus Paracelsus*, translated by Dr. Hester (1633), ordered, "To make oyle of butter, take newe fresh butter as much as you will, and put it into a Retort of glasse well luted, and there will come forth three liquors which thou must separate. This oyle doth pearce marvellously, and taketh away the paines of the gout, if you annoint them therewith: likewise the hands and face, it will preserve them faire. It is

also good for those that are troubled with a catarrh if you give them thereof an ounce fasting, for presently it arriveth to the stomacke, and mollifieth the catarrh in such order as you shall spit it forth at the mouth." In the *Rich Storehouse of Medicines* (1630), is given as "A singular good medicine for the Yellow jaundise, take a great apple and cut off the top thereof (so as it may cover the place again) and take out the core; and then put into the same place some sweet butter, and a good quantity of Turmerick, and a good quantity of English saffron; and then close it up again with the piece that was cut off, and roste it very tender, and let the patient eat thereof three or four mornings together whilst fasting, or longer if necessity require it." Baker tells of an Arab sheik who had consumed daily throughout his life two pounds of melted butter, and when upwards of eighty was as erect as a dart—"a perfect Hercules." Again, as "A good preservative for such as are delicate, or tender, and that cannot away with taking of medicines, take a toste of white or wheaten bread, and sprinkle thereon a little powder of sinnamon, and eat it in the morning fasting; but if sinnamon be not to be had then you may eat bread and butter alone, for butter is not only a preservative against the plague, but also against all other venoms and poysons." For the cure of Hiccough the following rhyme had to be repeated secretly, in old times, as a charm:—

> "Hickup, hickup, go away;
> Come again another day.
> Hickup, hickup, when I bake
> I'll give to you a butter-cake."

Without doubt the immediate success of this charm depended on a bodily effect wrought by suggestion to the mind.

Burton tells, in the *Anatomy of Melancholy*, about a baker in Ferrara, otherwise sound of mind and body, who thought he was composed of butter, and durst not sit in the sun, or come near the fire, for fear of being melted.

In the North of France (Langue d'oc) butter is the chief factor used in frying and boiling; in the South (Langue d'oil) the cooking agent is oil.

A simple plan for testing whether butter is genuine is to draw a cotton thread through a small cylinder of the butter so as to make a miniature candle: then set light to the cotton, and having let it burn a short time, blow it out. If there is no disagreeable smell left behind, the butter is pure: but if a tallowy odour is given off, it has been adulterated.

"Sic Semper!
Sic mihi de teneris spes infeliciter annis,
Et vota, et cupidœ prœteriere preces!
Arbusta in silvis, in aprico flosculus horto,
Sed manibus pereunt omnia pulcra meis:
Si forte effusi mirantem fulgur ocelli,
Jam me surpuerat cara capella mihi,
Cum scire vocem, peteret mea basia, mecum
Luderet, ad certam mittitur illa necem!"

"Oh! ever thus from childhood's hour
I've seen my fondest hopes decay;
I never loved a tree or flower,
But 'twas the first to fade away!

"I never loved a dear gazelle
To glad me with its soft dark eye,
But when it came to know me well,
And love me, it was sure to die."—*Moore.*

"I never had a piece of toast
Particularly long and wide,
But fell upon the sanded floor,
And always on its buttered side!"

"Butter," said Charles Lamb, in *Grace before Meat*, "ill melted—that commonest of kitchen failures—puts

me beside my tenor." The flavour of butter is due chiefly to the microbes developed during the ripening of the cream before it is churned, more than to the pastures on which the cattle are fed. "Soft words," says an old adage, "butter no parsnips." Dr. Pareira (*Food and Diet*) pronounces that cooked butter proves more obnoxious to the stomach than cooked olive oil because of the facility with which, under the influence of heat, the acrid volatile acids of butter are set free. Southey, quoting Shaw, has recorded the fact that the Arabs attempt to heal all simple and gunshot wounds by pouring fresh butter, almost boiling hot, into the part affected; and it is credibly alleged that numbers of persons have been cured by this method. "Butter," as Fuller tells (*Book of Worthies*), "is of a cordial, I may say antidotal, nature." The story is well known of a wife who, desiring to be a widow, incorporated poison with the butter whereon her husband had his principal repast. The poor man finding himself strangely affected repaired to a physician, who, by some symptoms suspecting poison, demanded of his patient which was his chief diet. The sick man told him that he fed most constantly on butter. "Eat butter still," returned the physician, "which hitherto hath saved your life; for it corrected the poison that neither the malignity thereof nor the malice of the wife could have their full operation." "About Suffolk, butter, in the quantity and quality of which this county dost excel, the child not yet come to, and the old man who is past, the use of teeth eateth no softer, the poor man no cheaper (in this shire), the rich man no wholesomer food. I mean in the morning. It was half of our Saviour's bill of fare in His infancy. 'Butter and honey shall He eat'" (*Isaiah* vii. 15).

For persons who cannot digest butter as an animal product, pure salad oil of the best quality makes a capital vegetable substitute.

CAT.

THE Cat, *Felis*, or *Catus domesticus*; the "harmless necessary Cat" of our households was reverenced by the ancient Egyptians as a sacred animal. They shaved their eyebrows as a mark of respectful sorrow whenever one of these creatures died. Peter Levens in this country, more than two centuries ago, ordered in his *Pathway to Health*, "For the lethargie in the head, in the hinder part, which maketh it for to shake: Take a pure black cat, and flea her, and pull out her bowels, and pick away the fat from the guts, and put them into the body again, and fill the body full of mustard seed well steeped in the juice of Nep (Ground Ivy), and sage, and then sew the body up, and roast it upon a spit till it be so dry that it drop no more moisture; then take the dripping that cometh thereof and put it in bladders, and when you will occupy it shave the patient in the neck, and annoint him by the fire in the joynt next to the head, and it shall help the grieved." Again, in the *Rich Storehouse of Medicines* (1650), is given "An experienced medicine for the sciatica. Take four or five great onions and roste them very soft, then pill them, and stamp them in a morter, and put thereto half-a-pint of aquæ vitæ (a cordial water made of beer and aniseed), and three spoonfuls of Neat's Foot oyl, and boyl all these together untill such time as the same be thick; then strain it thorow a fine linnen cloth, and so with the same oyntment annoynt the place where the grief is, chafing it before the fire for the space of a quarter of an hour (both morning and evening), and