quoting from Batchelor, notes that Sir Edward Lyttleton, when a mad dog had bitten several of his foxhounds, was advised to turn a flock of geese into the kennel. His dogs lapt up the dung of the birds, which was thought to be a sure preventative, or cure for canine madness.

Before summarily rejecting with aversion or scorn the thought of including some of the Animal excrements among present medicinal remedies, it will be worth while to note that these vary, in no small degree, according to the nature of the food and the digestive powers of the individual creature. Such excrements contain useful ferments in many instances. Unless contaminated with preter-natural bacteria, they have no stinking or offensive odour. Even the fæces voided by the pig (an omnivorous, dirty animal), which are usually most loathsome, become comparatively odourless and sweet when he is fed exclusively on barley meal. We have seen above that the excrementitious urine of serpents certainly has its recognized curative uses.

FINGER.

FINGERS, and hands have from the earliest times been the subjects of superstition, and enjoyed a curative reputation. The touch of the third or ring finger has been long supposed to exercise a healing effect, and the ancient physicians mixed their medicines therewith. "The ring finger," says an old writer, "stroked along any sore or wound will soon heal it. All the other fingers are poisonous, especially the forefinger." In Lancashire the forefinger of the right hand is thought to be specially harmful.

For consumptive patients in the province of Moray, Scotland, the nails of the fingers and toes are pared, and the parings are put in a rag cut from the clothes of each sufferer, the hand holding this rag being next

waved three times round his head whilst crying, "Deas soil;" after which the rag is buried in some unknown place. This custom is similar to that which Pliny records as practised by the Druids and magicians of his time.

About Norfolk the fingers are popularly called "Tom thumbkin," Will wilkin," "Long gracious," "Betty bodkin," and "Little tit."

"The nails," it is alleged in the *London Pharmacopœia* (1696), "given powdered or infused will cause vomiting, with great sickness at stomach, and giddiness in the head. Also, note! some do cure consumption by taking the hair and the nails of the patient, cutting them small and putting them in a hole in the root of a cherry-tree, and then stopping it with clay." The dried hand of a criminal who had been hanged was at one time in especial request for its wonder-working power, and was known as the "hand of glory." This usage was probably a degraded survival of rites attached to blood sacrifices. Mizaldus teaches: "If one bleeds from the right side of the nose, press hard the party's right finger that bleeds; if from the left side, then press the left finger in like case, for therewith the bleeding will cease. This is a common and proved remedy." The old rhymed superstition about various times for cutting the finger nails, Tuesday being the best day, is pretty widely known:—

"Cut them on Monday, you cut them for health;
Cut them on Tuesday, you cut them for wealth;
Cut them on Wednesday, you cut them for news;
Cut them on Thursday, a new pair of shoes;
Cut them on Friday, you cut them for sorrow;
Cut them on Saturday, see your true love to-morrow;
Cut them on Sunday, you cut them for evil,
For all the next week you'll be ruled by the devil."

Nail springs, or loose, sore skin at the sides of the nails, go by several names, as, "hang nails," "thang nail" (in Northamptonshire), "step-mother's blessings"

(in Yorkshire), "wirt springs" (in Lincolnshire), and "back friends" (in Staffordshire).

The Romans thought that a nerve runs from the second finger straight to the heart; hence they, and the Greeks, called it the medical finger, which nothing noxious could touch without giving warning forthwith to the heart. Says Shakespeare by the mouth of the second witch in *Macbeth*:—

> "By the pricking of my thumbs,
> Something wicked this way comes."

In Dorsetshire a mother cuts the children's nails over the open Bible, that they may remain honest as they grow up.

Scrofula was treated of old by the laying on of kingly hands in England and France. This ceremony was first performed by Edward the Confessor, in 1050; he being a saint as well as a monarch, and his royal touch being said to have often miraculously cured the king's evil and other complaints in Normandy. A special "office" for the healing of this kind was instituted by Henry the Eighth, in 1490, for the English Church, and continued to be printed in the *Book of Common Prayer* as late as 1715, after the accession of the House of Hanover. The practice was at its height in the reign of Charles the Second. Lord Braybrooke says: "In the first four years after his restoration, the king touched nearly twenty-four thousand persons."

It was argued in defence of the House of Lancaster against that of York that the crown could not descend to a female because the queen is not qualified by her form of anointing to cure the king's evil. But on July 18th, 1575, her Majesty Queen Elizabeth touched for the evil, and it was "a day of grace." "By her highnes' accustomed mercy and charitee

nyne were cured of the peynfull and dangerous disease called the king's evil; for that kings and queens of this realm without oother medsin (save only by handling and prayers) only doo cure it." In a letter from Lord Chancellor Hutton (September 11th, 1586), concerning an epidemic then prevailing in England, was enclosed a ring for Queen Elizabeth to wear between her breasts, which would have the "virtue to expell infectious airs." Andrew Boorde, in his *Introduction to Knowledge* (1547), wrote: "The kynges of England, by the power that God hath gyuen to them, dothe make sicke men whole of a sickeness called the kynge's euyll. The kynges of England doth halowe euery yere crampe rynges, the whyche rynges worne on one's fynger dothe helpe them the whyche hath the crampe." And concerning the king's evil, "For this matter, let euery man make frendes to the Kynge's Majestie, for it doth pertayne to a kynge to help this infirmitie by the grace the which is geuen to a kynge anoynted." In connection with the royal touching pieces of gold were given by the monarch to patients for being worn as amulets; these were called "touching pieces;" and, though they were not absolutely necessary for the cure, some persons declared that the disease would return if the coins were lost. Also, the money presented by the king when touching for the evil was called "healing gold." Malcolm asks, in *Macbeth* (Act iv. Sc. 2), with reference to this cure by the royal touch:—

"Comes the king forth, I pray you?
How he solicits heaven
Himself best knows; but strangely visited people
All swol'n and ulcerous, pitiful to the eye,
The mere despair of surgery, he cures;
Hanging a golden stamp about their necks,
Put on with holy prayers. And 'tis spoken
To the succeeding royalty he leaves
The healing benediction."

From a Register kept at Whitehall it would appear that Charles the Second had more patients than all the physicians of his realm. During that reign a gentleman, named Valentine Greatrakes, of good family and education, "Felt an impulse that the gift of curing the king's evil was bestowed upon him." He published an account of his cures of this and other diseases, such as ague and epilepsy, with various nervous disorders, in a letter to the Honourable Robert Boyle; and seems to have performed his cures "by the stroaking of the hands." Boswell records that Samuel Johnson, when thirty months old, was taken by his mother to London to be touched by Queen Anne, on the advice of Sir John Floyer, a physician of Lichfield.

Robert Herrick, about 1640, addressed some lines to the king (Charles the First):—

> "And to thy hand, the branch of heaven's fair tree,
> I kneel for help: O, lay that hand on me,
> Adoréd Cæsar! And my faith is such
> I shall be healed if that my king dost touch."

The practice of healing by Imperial touch dates from the Romans. Suetonius tells of miraculous cures performed in this way by Vespasian. Nepotianus relates that the right big toe of King Pyrrhus was curative of lumbago by its contact: "*Si cujus renes eo tetigisset*"—[an application remarkably suggestive of a modern personal indignity!]—and when the king's body was burnt after his death the toe remained unconsumed; it was subsequently kept as a relic in Jupiter's Temple at Dodona.

William the Third, if he reluctantly touched a person suffering from the king's evil, said, "He hoped God would give the sufferer better health, and more sense." Queen Anne was the last English sovereign who exercised the royal touch.

Burton cites from Sallust: "*Sedem animæ in extremis digitis habent*"—"With certain persons the seat of the soul lies in the ends of their fingers." About the nails there was formerly a Rabbinical saying: "*Ungues comburit sanctus; justus sepelit eos; impius vero spargit in publicum ut maleficæ iis abutantur*"—"By the saint his nail parings are burnt; by the just man they are buried; but by the wicked man they are scattered abroad in the highway for misuse by abandoned women."

In Cornwall, to place on the sick person the hand of a man who has died by his own act is thought to be a cure for many diseases. Hunt, in his *Romances of the West*, tells of a young man who had been afflicted with running tumours from his infancy. "When about seventeen years of age he had the hand of a man self-hanged passed over the wounds on his back, and, strange to say, he recovered from that time, being now comparatively robust and hearty." Another notion is that the touch is only effectual on one of the opposite sex. "I once saw," says this writer, "a young woman led on to the scaffold in the Old Bailey for the purpose of having a wen touched with the hand of a man who had just been executed." In 1650, "A present remedy for the hickop" was to "take thy finger ends, and stop both thine ears very hard, and the hickop will surcease immediately."—*Probatum est.* Similarly a trite old medical maxim of classic lore runs to the effect that: "*Ubi dolor, ibi digitus.*"

Clean hands, said the *Salernitan School*, "are essential for the maintenance of good health":—

> "Si fore vis sanus, ablue sœpe manus;
> Lotio post mensam tibi confert munera bina,
> Mundificat palmas, et lumina reddit acuta."

> "This precept conveys one of Nature's first laws,
> —If you wish to be healthy wash often your paws;
> A scrub after dinner will make you, oh, list!
> Clean-handed for billiards, clear-sighted for whist.—"

Quoth Herrick to the housemaidens :—

> "Wash your hands, or else the fire
> Will not tend to your desire;
> Unwasht hands, ye maidens know,
> Dead the fire, though much ye blow."

Charles Lamb, when playing whist with a partner whose finger nails were in mourning, exclaimed :— "Ah, Jones! if dirt were trumps what hands you would hold." In the Eastern dialect the hand or fist is "goll," and in Suffolk "golls" signifies large, clumsy hands. "By goll," or "By golly," is a very old English adjuration, meaning "by the hand."

"'Tis e'en so," said Hamlet, "the hand of little employment hath the daintier sense." It was told of the Isabella of Ariosto, who was courted by Rhodomant : "*O quales digitos, quas habet illa manus.*"

"To stop bleeding at the nose presently," the direction is given in *A Thousand Notable Things*, "tie a piece of pack-thread about your little finger, just above the upper joint, as hard as you can bear it, or about both your little fingers."

Formerly the thumb and the first two fingers were always held to be symbolical of the Three Persons of the blessed Trinity. Bishops, because they exercise ecclesiastical authority, and doctors, because they have authority to teach, should wear the ring on the third (ring) finger of the right hand. "Noble persons," wrote Petronius Arbiter, "did wear rings of gold on the medicinall finger of the left hand, called by the Latines, '*digitus medicus*,' as the little finger his neighbour '*auricularis*'; this finger on the left hand is rarely afflicted with the gout, for the sympathie and neighbourhood it hath with the heart (the first living and last dying), which conserveth the gouty. And this is the reason why, at sacring, the most Christian monarches of France (the

onely solemne act which they doe in all their life), the ring of gold is put on the fourth finger of the left hand in signe of a marriage that day between them and the kingdome." In the sixteenth century it was often customary to speak of the gout as *par excellence*, "the enemy."

FISH.

ECCLESIASTICAL biography records that Roger Ascham (1560), urged a petition that he might be dispensed from eating Fish. "The Egyptian priests," he said, "were restricted from ever partaking of such food, no doubt for this only cause: '*ne ignea vis ingenii atque præstantia ullo frigido succo quem esus piscium ingeneraret, extingueretur*': 'lest the fire and brilliancy of intellect should be extinguished by any cold humor which the eating of fish would engender.'"

It has been commonly supposed that as food the substance of Fish generally is less nourishing than the flesh of mammals and birds; and it has been repeatedly noticed that leprous skin diseases prevail amongst those persons who live exclusively on Fish, especially of the poorer sorts. Except where it is known that unwholesome varieties of Fish are met with, and where also the wholesome kinds are liable to rapid decomposition, leprosy is rare in temperate regions. Pepsine (which see) if then given habitually, will help to prevent the formation of injurious putrid ferments, or ptomaines, from corrupt fish within the intestines. It will likewise promote a cure in cases which have become chronic.

But on the other hand, Fish has gained the reputation of imparting phosphorus to the brain, and of thus improving the intellectual powers. "Not that its use," writes Agassiz, "can turn an idiot into a wise or witty

man; but a Fish diet cannot be aught else than favourable to brain development." Again, Fish has the popular credit of renovating the sexual energies, and stimulating the sexual impulses. This effect is attributed to the phosphoric oil which many fish contain. "The founders of the religious Orders," said Montesquieu, "who aimed at enforcing the impracticable law of chastity on their members missed their end in prescribing for these unhappy victims an habitual diet of Fish."

The Hudson's Bay Company have capital opportunities for testing the comparative merits of animal food and fish on their employés every spring when the brigades of boats are on their way out with the furs. There are trials of strength then in rowing, and with the result that the fish-eating crews invariably have the advantage, especially when their efforts are long sustained. This is contrary to the usual belief that meat is the more nourishing and strength-giving. Salmon, eels, mackerel, and herrings, which abound in oily matter, afford more nutriment than other kinds of Fish, but are proportionately less digestible. The thirst and dyspepsia often experienced after using these richer sorts have led to the taking of spirituous liquor as a condiment therewith; so that a common proverb has come into vogue that, "Brandy is the Latin for fish." The punch which flanks the fish at Billingsgate dinners has thus gained a widespread notoriety.

About fish a maxim of the Salernitan School pronounced,—

> "Si pisces molles sunt, magno corpore tolles;
> Si pisces duri, parvi sunt plus valituri."

"The increase," wrote Izaak Walton, "of those creatures that are bred and fed in the water is more

advantageous to man, not only for the lengthening of his life, but for the preventing of sickness; for 'tis observed by the most learned physicians that the casting off of Lent and other fish days has doubtless been the cause of those many putrid, shaking, intermitting agues unto which this nation of ours is now more subject than those wiser countries that feed on herbs, sallads, and plenty of fish; and it may be fit to remember that Moses (*Leviticus* xi. 9; *Deuteronomy* xiv. 9) appointed Fish to be the chief diet for the best commonwealth that ever yet was."

Fresh-water Fish, such as are bred in muddy and stagnant waters, and have a taste of mud should be rejected: "*Nam pisces omnes qui stagna lacusque frequentant semper plas succi deterioris habent.*"

> "All fish that standing pools and lakes frequent
> Do ever yield bad juice and nourishment."

The flesh of fish is always at its best during the period of the ripening of the milt and the roe. After the fish has deposited its spawn the flesh becomes soft and loses much of its characteristic flavour; this is owing to the disappearance of the oil or fat from the fibre, it having been expended in the function of reproduction.

Persons who had faith in the signs of the Zodiac as affecting human health, formerly believed "the fish with glittering scales" to exercise an influence on man's footsteps:—

> "Et femur Arcitenens, genera et Capricornus amavit,
> Cruraque defendit Juvenis, *vestigia Pisces.*"

Marcilius Ficinus advised all prudent persons to consult an astrologer every seven years, and in particular to respect and to use properly the means of the three holy kings—Gold, Frankincense, and Myrrh. As a

curious instance of the weight formerly attached to such astrological influences, Culpeper said: "People usually boil Fennel with fish, and know not why they do it, but only for custom, when indeed the original of it was founded upon reason, because fennel consumes the phlegmatick quality of fish which is obnoxious to the body of man, fennel being an herb of Mercury, and he so great an enemy to the sign Pisces."

Some persons find that Fish as a food is soporific and sedative.

In the flesh of fish putrefaction follows on death more immediately than in animal flesh, for water-breathing creatures have no reserve store of conservative tissue which tends to delay this. "It is not always necessary," tells a proverb, "to cry stinking fish." Putridity may be active without the generation of fetid effluvia.

The most salutary way (Dr. King Chambers has taught), of cooking such oily fish as sprats, pilchards, or herrings, is to bake them in a deep dish in layers, with a layer of bread-crumbs between each.

Sea Anemones have been tried as food, the beadlet, the opelet, the big dahlia, and others; but the entire quantity of solid matter in an anemone is very small. A dish called "rastegna," which is much favoured in Provence, is prepared chiefly from the opelet.

Frank Buckland said the eggs of the Barbel are poisonous, and produce the same symptoms as Belladonna.

From the scales of the Bleak (*Alburnus lucidus*) is formed, by friction and washing, an essence of Orient, used for making artificial pearls by lining therewith the inner surface of small glass balls.

"Physicians find," says Izaak Walton, "the galls and stones in the heads of Carps to be very medicinable;

and it is not to be doubted but in Italy they can earn great profit of the spawn of carps by selling it to the Jews, who make it into red caviare: the Jews not being permitted by law to eat of caviare prepared from the sturgeon, that being a fish that wants scales, and, as would appear in *Leviticus* xi., by them reputed to be unclean."

Again, "I have known of one that saw, on a hot day in summer, a large carp swim near the top of the water with a frog upon its head; and of seventy or eighty carps which had been put into the said pond (which he caused to be let dry), he only found five or six, and those very sick and lean, with every one a frog sticking so fast on the head of these carps that the frog would not be got off without extreme force or killing. And a person of honour in Worcestershire assured me he had seen a necklace or collar of tadpoles hang like a chain or necklace of beads about a pike's neck to kill him; whether for meat or malice, must be to me a question."

The Chub, or Chavender, is esteemed by the French so mean that they call him "*un villain.*" "Nevertheless," says Walton, "he may be so dressed as to make him very good meat; but remember the rule that, a Chub newly taken and newly dressed is so much better than a Chub of a few days' keeping after he is dead, that I can compare him to nothing so fitly as to cherries newly gathered from a tree, and others that have been bruised and lain a day or two in water. You shall read in Seneca that the Ancients were so curious as to the newness of their fish that it seemed not new enough which was not put alive into the guest's hand; to which end they did usually keep the living fish in glass bottles in their dining rooms; and they did

glory much in their entertaining of friends to have that fish taken from under their table alive that was instantly to be fed upon. And," he says, "they took great pleasure to see their mullets change to several colours when they were dying."

In Chatham there is a reputed cure for whooping cough: to, "Cut a live dab in two, drain out the blood, and soak lumps of sugar in the same, giving the gory morsels to the ailing child."

"The Grayling and Umber differ nothing (to quote Izaak Walton) in England, but in their names. The French value this fish so highly that they say he feeds on gold, and that out of his belly, from the River Loire, grains of gold have been often taken; and some think that he feeds on water-thyme, and smells of it at his first taking out of the water, and with as good reason as we do that our smelts smell like violets at their first being caught, which I think is a truth. 'Tis certain all that write of the umber declare him to be very medicinable. And Gesner (1545) says that 'the fat of an umber or grayling being set with a little honey a day or two in the sun, in a little glass, is very excellent against redness or swarthiness, or anything that breeds in the eyes.' Saint Ambrose, the glorious Bishop of Milan, who lived when the Church kept fasting days, called him the 'flower fish,' or 'flower of fishes.'"

A professor of the State Agricultural College, Connecticut, when lately investigating the comparative values as food of meat and other matters of our daily sustenance, found that the climax of nutrition is reached in the much despised, but eminently popular Red Herring This, the "bonnie fish and halesome farin" of Scotland, is also known as "Cape Cod Turkey," "Yarmouth capon," "Tow bowen" (in Suffolk), and,

when dried, "Kipper," or "Bloater." To "bloat," in old provincial English, is to "dry by smoke."

What patriotic Scotchman does not know and love the same highly sustaining fish? And a capital pick-me-up the Kipper is to the dry throat and sated palate next morning after a booze overnight:—

"The Doctor was drunk as the deuce, we said,
And we managed a shutter to borrow;
We raised him, and sighed at the thought how his head
Would consumedly ache on the morrow.
We bore him home, and we put him to bed,
And we told his wife and his daughter
To give him next morning a couple of red
Herrings, and Soda-water."

Fresh, or dried, they are the staple food of the people in the Isle of Man. The *Rich Storehouse* contains an old recipe: "For the swelling of the legs that comes on by cold or otherwise, take white herrings out of their pickle, and open them, and then lay the insides of the same herrings to the soles of your feet when you go to bed, and so let them remain all night; in the morning apply new ones again. Use this five or six times and the same will help you, *probatum est.*" Again, as an approved medicine for ague, "Take a herring that is well pickled, and split it on the belly side, and warm the same very hot, and lay it to both soles of the feet of the party grieved, and this will help immediately." For ague, in Queen Elizabeth's time, the old apothecaries' remedy was a well-salted herring split open and applied as above.

In Russia currant jelly is taken as a condiment with red herrings. Alphonse Karr tells most amusingly (in *Tour Round my Garden*), of a midnight mass at Lille, where "some old women were praying and preparing a supper called, a *reveillon* or *medianoche*: from time to time they drew from under their petticoats a small chafing dish, upon which were cooking two or three

herrings ; they turned the herrings, put the chafing dish back *in its place*, and resumed their prayers."

The Ling (*lota malva*) has a very large liver from which oil is freely extracted, and used by poor fishing folk to burn in their lamps. This has been found effectual in severe cases of rheumatism when mixed with small beer in doses of from half an ounce to an ounce and a half. Buckland thought the liver a dainty dish.

In the early dispensatories and herbals many of the remedies prescribed had to be taken in "white wine, ale, or beer," which beverages were of a simpler and less spirituous sort than our modern drinks. Tinctures such as we use for embodying the concentrated virtues of remedial substances in a small quantity of spirit were then unknown; they can be so freely diluted with water as to be altogether non-intoxicating. Moreover, we administer medicines in barley-water, or skimmed milk, or claret and water. Polydor Vergil described the ale of our forefathers (in Henry the Eighth's reign) as "A most wholesome and pleasant drink, with an especial virtue against the melancholy, as our herbalists confess."

There is in Somersetshire a common saying that, "Mackerel is in season when Balaam's ass speaks in church," *i.e.*, when *Numbers* xxiii. and xxiv. are read as the lessons for the day. Robert Lovell tells (1661): "Mackerel are naught for those that are troubled with the epilepsy ; they are not to be used except by young, strong men."

"For mist of the eyes," it is taught by another old writer, "let him take live Periwinkles burnt to ashes, and let him mix the ashes with dumbledore honey—*melle attico*—(that of the *apis bombinatrix*)."

It was observed by Gesner that the jawbones, and galls, and hearts of Pikes are very medicinable for

several diseases, or to stop blood, to abate fevers, to cure agues, to oppose or expel the infection of the plague, and to be many ways medicinable and useful for the good of mankind; but the biting of a pike is venomous and hard to be cured."

A curious Cornish saying refers to "eating fair maids (fermades or fumadoes), Pilchards, and drinking mahogany (gin and treacle)." When there has been a large catch of these fish, and when they are packed in rows, alternately of heads and tails, the air-bladders burst, and a squeaking sound is produced which is called "crying for more"; it is understood to signify that more fish of the sort may be soon expected. The cry, "Heva, heva," is then shouted from the hills by the "huer," and a watch kept therefrom for the approach of pilchards. But to whistle by night is an unpardonable sin among the fishermen of St. Ives; (and no miner will allow of whistling underground). "Perhaps they feel that whistling indicates thoughtlessness, and they know their labour to be a serious matter involving danger."

A legend says that the devil never came into Cornwall. When he crossed the Tamar to Tor Point he could not but observe that everything, animal or vegetable, was put by the Cornish people into a pie. He saw and heard of "fishy pie," "star-gazy pie," "conger pie," and, indeed, pies of all the fishes in the sea; of "parsley pie," and "herby pie," of "camy pie," and "piggy pie," and pies without number. Therefore, fearing they might take a fancy to a "devily" pie, he hied him back again into Devonshire.

"In case a man be lunatic," it was directed in *Saxon Leechdoms*, "take skin of a mere swine, or Porpoise, work it into a whip, and swinge the man therewith; soon he will be well. Amen."

In the old Welsh *Red Book*, a prescription of the thirteenth century advised, "A salmon and a sermon in Lent." This was the Latin *Salmo*, or leaping fish: "Daintie and wholesome," wrote Fuller, "and a double riddle in nature: first, for its invisible feeding, no man alive having ever found any meat in the maw thereof; secondly, for its strange leaping, or flying rather, so that some will have them termed 'salmons' *a saliendo*—being both bow and arrow it will shoot itself out of the water an incredible height and length. Whereas in other countries they are seasonable only in summer, in Herefordshire they are in season all the year long. This county may say, '*Salmo non æstate novus nec frigore desit.*' The river of Wy affords brumal salmons fat and sound, when they are sick and spent in other places."

Shrimps, in the opinion of Robert Lovell (1661), "were held to be good for sick people, and of few excrements, being of the best juyce."

From the Starfish (*asterias rubens* or *uraster rubens*) a tincture of the living animal cut in pieces is made (H.). This creature goes by the name of "slab" in the north.

By the ancient Romans the Sturgeon (or royal fish) was esteemed to be such a delicacy that the servants bringing it to table were crowned with wreaths of flowers. In firmness and dark-red colour a sturgeon steak resembles beef, and is almost as savoury. It has been said that out of sturgeon a good cook can make beef or mutton, pork or poultry—in other words, fish, flesh, or fowl. "Oh flesh, flesh! How art thou fishified!" Robert Lovell declared, "the flesh cleareth the voice." Caviare is prepared from the sturgeon's roe. It should be as fresh as can be got, exhibiting such freshness by its softness and light colour. The black,

hard sort of fish jam which is sometimes served up is really unfit for human consumption. Pepys, in his diary, May 22nd, 1567, wrote: "This day, coming from Westminster, we saw at Whitehall Stairs a fisher-boat, with a Sturgeon that he had newly catched in the river, which I saw, but it was but a little one, but big enough to prevent my mistake of that for a colt if ever I became Mayor of Huntingdon." "Something had been seen floating in the meadows between Huntingdon and Godmanchester during a high flood. This the Huntingdon folk declared was a Sturgeon; but when rescued it proved to be a young donkey. Whence had come the derisive term 'Huntingdon Sturgeons.'"

"The Tench is the physician of fishes," says Izaak Walton, "for the pike especially; and the pike, being sick or hurt, is cured by the touch of the tench; and it is observed that the tyrant pike will not be a wolf to his physician, but forbears to devour him though he be never so hungry; that not only does the tench carry with him a natural balsam to cure both himself and others, but in his head there are two little stones which foreign physicians make great use of in the cure of their patients, and that Rondeletius says that at his being at Rome he saw a great cure done by applying tench to the feet of a very sick man. This was considered a Jewish secret handed down by tradition from the days of Solomon, who knew the nature of all things."

In the *Rich Storehouse* (1650), a good medicine is commended, "To increase milk in a woman's breasts, take some of the broth that Whitings are sodden in, and give to the woman that wanteth milk in her breasts to drink often, and this will increase her milk very much." "Whiting are so called" (*Alice in Wonderland*), said the Gryphon, "here because they do the boots and

shoes; on the land these are done with blacking, but beneath the sea they're done with Whiting."

Under the name of "Ichthyol" (fish product), a remedy of great value for the cure of many skin diseases has obtained the comparatively recent esteem of doctors. It is got from a bituminous quartz in the Tyrol, which consists chiefly of the decomposed remains of Fish, the substance being treated chemically with sulphuric acid and then neutralized with ammonia, so that practically it is a sulpho-ichthyolate of ammonium. This medicament occurs as a viscous, brownish, almost black matter, with a disagreeable, tarry, benzene odour, being a powerful bactericide or destroyer of bacterial germs. Locally likewise it lulls pain and promotes absorption; being used externally for the most part, but also given in daily quantities of from ten to thirty grains. Dr. Stacey Jones said, in 1894: "During twenty-seven years' practice, having treated over sixty thousand cases, I have never seen such magical cures as those effected with ichthyol." He has quoted instances of chronic eczema of eight or nine years' standing, and even ulcerated severely, as cured within a month. Ichthyol is again an admirable application to inflamed piles, it constringes the turgid veins at once, eases the pain and acts with healing power as a beneficial germicide. By the external and internal use of Ichthyol medicine is now armed with the most efficient means yet devised for the treatment of blood and skin diseases, including eczema in all forms and varieties, acute and chronic. A very useful ointment is to be made containing from twenty to fifty per cent of the Ichthyol, with Lanoline (sheep's wool fat), which is most excellent for skin diseases arising through faulty nervous energies, also for neuralgia and chronic rheumatism; this can

be combined with alkaline salts of lithium and soda. Capsules of Ichthyol are given internally, each containing about four grains, and the dose being one or two. Further, the remedy is capital for relieving some forms of chronic constipation.

At Dieppe, Brighton, and Hastings is caught the Kingston or Monk fish, or Angel fish (*Squatina angelus*), which has large, flexible side fins or wings like those of a depicted angel, and which smells strongly of ammonia. Its eggs were formerly ordered in the officinal pharmacopœia, dried and powdered. The skin also was prepared in like manner, and given for scaly skin diseases.

Another nostrum for delicate children is supplied, at Chatham and elsewhere, by a long, eel-like fish caught in the river, and which is hung up entire to dry, with its tail put into the mouth. When quite hard, a small quantity is scraped off each day and given to the child.

Again, a certain preserved fish, known in South Africa as "Snoek," causes the face to swell as though with mumps. This property is believed to be got by the fish being put to become dry in the moonlight; and although any such lunar influence is discredited by scientists, yet in the present case it appears to be an allowed fact.

The effects of Moonlight on animal matters are well known to the inhabitants of warm climates. Observant naval officers have testified that in the tropics when there is no moon the fresh meat is hung over the ship's side at night for coolness; but if this is done when the moon shines the meat becomes unfit to eat. Bright moonlight will also develop in some persons a temporary loss of sight.

It may be added about herrings that: "They have,"

said Lovell (1661), "a fair and soft flesh, whilst very delicate, and much desired by the Hollanders. Some use them—the backbone being taken out—with onions, apples, vinegar, and oile ; their pickle cleaneth fetid ulcers, and helps gangrenous quinsies and botches." Herring pies were regarded as rare delicacies by our forefathers during Lent. The herring dies directly it is taken out of the water, so that, "As dead as a shotten herring" is proverbial.

Zetlanders will keep their fish for some days until it begins to putrify, the taste then being far from disagreeable, though not so the odour. They call such fish "blawn"; its ptomaines, or mortified products, must be deleterious when taken into the blood from the stomach and intestines.

With reference to the quick decomposition of fish out of the water, natural death in the sea seems to occur more rarely among fishes than in any other part of the animal kingdom. This is a most happy circumstance, because in water all vegetation, which is the great means of correcting animal putrefaction, exists in a very minor and subordinate degree. The salts of the ocean must be a great preservative and protection in this respect, else dead fish would soon diffuse abroad dreadful pestilential effluvia.

Considered altogether, an exclusively fish diet is certainly calmative, and likely to prolong life in excitable persons of vivaciously nervous temperament, though it has been shown to favour ailments of the skin.

In ancient times certain people fed entirely on fish, and were known as Ichthyophagi. Herodotus says there were three such tribes of Babylon.

The skin of fishes is a gelatinous integument, forming in the turbot (which is the *Rhombus* of the Romans), and

the ling, rich and valuable sustenance. Oily fishes are always more difficult of digestion than those of white flesh void of fat. The whiting is often termed "the chicken of the sea," being pre-eminent for its easy digestibility.

Falstaff talked slightingly of, "Demure boys who, by making many fish meals, fall into a kind of male green sickness, and then when they marry they get wenches; they are generally fools and cowards (which some of us would be too, but for inflammation)."

The roes of fishes have a similar composition and bear a striking analogy to the eggs of birds, that of the pike and the barbel being purgative. The milt (testicle) is the soft roe, and the ovary is the hard roe. Hufeland and others have recommended the soft roe of the herring as a remedy for obstinate cough and hoarseness, also for consumptive disease affecting the windpipe. It is to be taken in the morning whilst fasting. In the *British Medical Journal*, at Christmas, 1897, a case of poisoning of mother and child by herring roe was recorded. "P. Forestus," says Burton, "in his medicinal observations relates that Carthusian friars, whose living is most part fish, are more subject to melancholy than any other order; and this he found by positive experience, being sometimes their physician in ordinary."

Dr. Mortimer Granville, in a letter to the *Times*, some while ago, declared that, having made a somewhat extensive trial of fish as almost the sole food of persons suffering from mental distress, weakness of mind, and mental excitement, he met with results so startling that possibly he may have been led to take an exaggerated view of its value. Even while cutting off meat entirely, as well as milk, eggs, and butter, from the diet of an

excited maniac who was well supplied with fish, quietude was established, without any loss of weight, of nervous power, or of bodily strength. The mental confusion subsided, the temper improved, sleep became natural without any recourse to sedatives, and the general health was speedily benefited. Dr. Granville warmly advocates, not only for those who are ill, but also for general use, the substitution of a fish diet frequently instead of the highly nitrogenous elements of an ordinary mixed meat menu. Sir Benjamin Richardson taught that pollack holds all the necessary qualities of fish as food most equally balanced; but that the strongest and most nutritive fish is sturgeon, which equals in all the essentials the best flesh meats.

To enquire jocularly of a St. Ives fisherman, "Who whipped the hake?" angers him exceedingly. Some while ago hakes frequented the Cornish coast in excessive abundance, insomuch that the seiners (or net fishers) tried to drive them off; one of these fish was flogged and flung back into the sea, "Upon which all the hakes left that coast and kept away for years." Also, in Cornwall St. Leven entertained his sister, Breeze, and her two children with some Bream he had caught. The hungry children ate so greedily that they gorged themselves to death; and this fish now goes among fishermen by the name of "Choke-children." The Carpe gets its name from "*carpo*," Latin, "to snatch" (at bait); and the Tench has its title from "*tincta*," "tinted." Izaak Walton says of this latter, as physician to the pike:—

> "Close to his scales the kind physician glides,
> And sweats the healing balsam from his sides."

Old Fuller writes: "It is very pleasant in taste, and is called by some the 'Physician of fishes'; though in

my opinion it may better be styled the 'Surgeon,' for it is not so much a disease as a wound that he cureth; nor is it any potion but a playster which he affordeth, *viz.*, his natural, unctuous glutinousness which quickly consolidateth any green gash in any fish. Some have observed that the pike, though never so hungry, forbeareth to eat this fish which is his physician; not that pikes are capable (which many men are not) of gratitude, but that they are endued with a natural policy not to destroy that which they know not how soon they may stand in need of." Frank Buckland denied this fishy friendship, saying you cannot put a better bait for a pike on a trimmer than a young tench. He speaks amusingly, too, of a fine old sailor who yarned of it as "a curious thing as any fish will eat boiled cabbage, or boiled onions, for which rubbish they comes about the ships at Spithead."

Mackerel are caught on the Essex coast in large fixed nets called "kettlenets." Hence the phrase is thought to have been derived of "a pretty kettle of fish": though it is also referred to the apparatus of pulleys used in hoisting an anchor when the same gets out of order and confusion arises.

Counters used at games of cards are often made in the shape of fish from a misapprehension of the French word "*fiche*, "a five-sous piece." The two points given for the rub at whist are called "*la fiche de consolation*."

Theodore Hook enjoyed his soup and his fish served so liberally that at last he playfully declined another plate of turtle on the plea that he was not a "soup or fish all" person.

"Fish," says a proverb, "must swim thrice"—once in the water, then in sauce, and next in wine (after

reaching the stomach). "*Poisson, goret, et couchon vit en l'eau, et meurt en vin.*"

"Fish and swine
Live in water, and die in wine."

The mullet was for the Romans *the* fish *par excellence*, It was costly and cooked on the table to please the guests. In a glass vessel filled with clear brine and mackerel's blood, the live mullet stripped of its scales was enclosed, and as its fine pink colour passed through many a dying gradation the guests looked on admiringly. From its liver the best and most expensive Roman *garum* was concocted.

The old Latin *botargo*, or *botargum* was a kind of salt cake or sausage made from mullet roe, with eggs, blood, and salt. It was eaten with oil and vinegar, being thought to strengthen the stomach, help the appetite, increase seed, and as good against consumptions; it also created a thirst for wine. Robert Lovell (1661) wrote: "The flesh of the sea-mullet's head with honey helps vices of the fundament."

From the mackerel or scomber, pickled, the Romans made their ordinary *garum*, a favourite sauce, which was also used by them medicinally in clysters.

"Exspirantis adhuc scombri de sanguine primo,
Accipe fastosum, munera cara, garum."

"Of brine, and blood fresh from the dying fish,
Take *garum*, my fond gift, a sumptuous dish!
'Twill doubly serve—your appetite to mend
And clear, by clyster, at the other end."

The curd or fatty substance which is found between the flakes of Salmon flesh is wholesome only for twelve hours after the death of the fish.

"Folkestone beef," said Frank Buckland, "is a local name given to the 'Rig' or common 'Tope'; the 'Huss,'

or 'Robin huss,' a small dog-fish; the 'Bull huss,' or large spotted dog-fish; the 'Fiddler' or 'Shark-ray,' and 'Uncle Owl,' a species of skate." Freshly caught Rigs at the bottom of the boat are savage: "They all goes mad, sir, and its like being among a lot of wild beasts." When cut up or split into halves the dog-fish are salted and dried, being taken by the poorer class as food, and tasting when broiled "like veal chops." The livers are cleaned, and boiled for oil. There is a great amount of gelatine in the heads and fins.

These fish are viviparous, and produce their young ones alive, each in a loose, membranous bag. Their name, "dog-fish," is a happy one, seeing that they hunt after a submarine quarry in packs, somewhat as dogs do on land. "Old Neptune doubtless has fine sport mackerel-hunting on the Warne Bank off Folkestone with his 'spotted dog' pack."

"The huss has only one bone" (the vertebral column), say the fishermen, and can be readily cut up into "filleted sole"; for which purpose considerable numbers of this fish find their way eventually to Brighton. The Rig shuts its eyes when asleep. Cod-fish are caught, also, largely in the same waters. The dried heads of Cods are used in Norway as fodder for cattle, being taken by these animals with much fondness.

Conrad Gesner (1550) says: "The river Pearch are so wholesome that physicians allow them to be eaten by wounded men, by men in fevers, or by women in child-bed. These fish have in their brain a stone which is in foreign parts sold by apothecaries, being there noted to be very medicinable against the gravel in the reins." They are of the genus "Perca," and, says the delightful Book hunter, "The use of a Greek derivative gives notice that you are scientific. If you speak of an

acanthopterygian it is plain you are not discussing Perch in reference to its roasting, or boiling merits; and if you make an allusion to *monomyarian malacology* it will not naturally be supposed to have reference to the cooking of Oyster-sauce."

About applying the pickled Halec, or Herring, to the feet as a cataplasm in fevers for drawing the humours downwards, and thereby relieving the head, Dr. Quincy (1728) pertinently says: "Such a property seems more likely to arise from the salt which is used in the pickle than the virtues of the fish."

FLEA.

THE common Flea is the classic *Pulex*. It is remarkable that fleas and other parasitic insects never infest a person who is near death, insomuch that to notice this has become a popular sign of approaching dissolution. "The fact is, in all probability," says Timbs, "caused by an alteration then in the state of the fluids beneath the skin, either in quality or in quantity. This "little sable beast, called a flea, if thirsting much after blood argues rain," as we learn from *Nature's Secrets*. The Flea whilst in its larval state feeds on the half-digested blood which forms the excrement of its parents: "thus demonstrating the tendency on Nature's part," writes Mr. Gosse, "to save all material possible, so that every fragment may be picked up." Among Water fleas the male is a puny, insignificant creature compared with the female, and living on her as a parasite. Lord Beaconsfield, when he was Mr. Disraeli, spoke of the national debt as "a mere flea-bite."

When it happens, as told above, that fleas leave the members of a moribund body as soon as it begins to lack vital heat and energy, they draw first to that other

part of the body where the same heat tarries longest, which is in the hole of the neck under the chin. "That's a valiant flea," says the Duke of Orleans in *Henry V.*, "that dare eat his breakfast on the lip of a lion." In folk-lore the first of March is intimately associated with fleas; and it is still a practice in Kent to keep the doors shut on that day, thus securing immunity from fleas for a twelvemonth.

It is far from unlikely that fleas, which infest only persons in health, may possess certain medicinal virtues, and may sometimes do general good even when causing local irritation The subject is worth experimental enquiry. Dr. Francis, U.S.A., supposed the *cui bono* of the Mosquito, an allied insect, is to drive man from malarial districts. If he won't go, then the Mosquito by its bite injects beneath the skin a minute quantity of a liquid which exercises the antidotal powers of quinine.

With a view to banish the persistent little fleas from premises where they abound, according to old Tusser (1562), Wormwood is a sure appliance:—

> "While Wormwood hath seed, get a handful, or twaine,
> To save against March, to make flea to refraine:
> Where chamber is swept, and Wormwood is strewn,
> No flea for his life dare abide to be known."

FLY.

It is found that by general consent most persons think the common House fly (*Musca*) a great nuisance, and the Blue-bottle, or Blow fly, a disgusting pest. But the instinct of the latter for carrion can be turned to a useful purpose. In the *Lancet* (July 31st, 1886), it is related that certain offensive smells becoming obnoxious in one of the rooms within the town house of an American citizen, the exact source of which could

nohow be ascertained, though carpets were taken up and floors carefully examined, an appeal was made to the well-known tastes of the Fly. Two Blue-bottles were brought from a neighbouring stable, and the doors and windows of the contaminated house were closed; the flies soon settled down on one of the cracks in the floor, and when the boards were raised at this spot a decomposed rat was discovered.

Franklin, when visiting France, found in some old Madeira from America a few dead flies which he exposed to a warm sun during the month of July, and in less than three hours these apparently dead creatures recovered life which had been so long dormant. The acute philosopher reasoned within himself that since by such a complete suspension of all internal as well as external consumption it was thus possible to produce a pause of life, and at the same time to conserve the vital principle, might not such a process be employed with regard to man; and, "If this be the case," added he, "I can imagine no greater pleasure than to cause myself to be immersed along with a few good friends in Madeira wine, and to be recalled into existence at the end of fifty or more years by the genial solar rays of my own country, if only that I might see what improvements the State has made, and what changes time has brought about by then." Flies, especially the blue-bottle, are able to pipe like the wind.

The Spanish fly (*Cantharis vesicatoria*), or Blistering fly, is really a beetle, which is found, though rarely, in England (on the lilac, the privet, and other shrubs), but is collected chiefly in Hungary and Southern Russia. It also sometimes frequents our ash, elder, and honeysuckle; belonging to the order Coleoptera, and having two shining, metallic, green wings, under which

are two transparent, membranous wings; its odour is strong and disagreeable; and the flies, when dried and powdered, are greyish-brown in colour containing shining green particles. A blistering principle, which is used in medicine and bears the name of Cantharidin, resides mainly in the soft parts of the insect.

For blistering the skin, according to the old-fashioned way, with the view of relieving deeper-seated pain and inflammation, vesication is produced by applying the Spanish fly externally in liquid or plaster. But it is now known that if a blister be thus employed too immediately over a serous, or water-secreting membrane below, then a corresponding redness and soreness of this underlying membrane are mischievously excited, particularly if it lines a cavity, as of the chest or abdomen, or of a joint; so that the said method has become a good deal exploded in favour of specific medicines (H.). Several of these are now understood as having internally a curative affinity for the particular seat of congestive inflammation, or for the nerves and their branches which are aching, on the outside.

When swallowed the Spanish fly acts as a violent acrid poison, exciting angry inflammation within the stomach and bowels, affecting also the nervous system profoundly, and setting up ardent pain in the bladder, with difficult, bloody urine, and straining. The throat becomes constricted, and swallowing is difficult; griping and great tenderness of the belly are caused, with giddiness; in severe cases convulsions, delirium, insensibility, and death. The lining membranes, too, of the kidneys and of the urinary passages are inflamed, the urine being scanty and high-coloured, whilst most difficult to be passed. Acting on a thoughtful knowledge of all these toxical effects, the physician (H.) has prepared

a tincture of the Cantharis which, if given in doses of a single drop, with water, every two, three, or four hours, will signally relieve all the severe symptoms which have been recited, when they occur morbidly from other causes. It will at once serve to diminish irritability of the bladder from cold, and of the urinary ducts, as well as strangury; will lighten oppression of the brain from watery effusion within its cavities, and will be effective to relieve such blistering of the external skin as occurs from burns, scalds, erysipelas, or shingles. For like reasons the diluted tincture is admirably useful as a chief remedy for pleurisy with watery effusion poured out within the walls of the chest, and for some forms of albuminous urine (Bright's disease). Also a lotion may be employed externally to the injured or eruptive skin surface, one part of the tincture to twenty parts of cold fresh water. The active blistering principle, Canthardin, of the Fly is obtained by the chemist in small white crystals, which are soluble in ether, or boiling spirit of wine. But another property of the insect to powerfully stimulate the sexual organs depends upon some distinct oily element yet unknown.

In *A Thousand Notable Things* (1815), we read that a certain citizen of Padua having Cantharides, that is to say Spanish flies, applied to one of his knees, did pass from the bladder above five ounces of blood; and the like happened to one to whose great toe the same was applied. It is conjectured that Sir Thomas Overbury, on whom the Rochesters practised poisonous arts, was subjected to Cantharides.

Water in the brain occurring in scrofulous children, or as the secondary consequence of brain fever, will yield effectively to the tincture of Spanish fly sufficiently

diluted; and the form of diabetes in which an inordinate quantity of watery urine is continually excreted, but without containing any sugar, may be cured thereby.

Galen, Pliny, and Dioscorides held that the poison of the Spanish fly exists in its body, whilst the head and wings contain an antidote. In the summer of 1837, this insect, which is comparatively so rare in England, appeared in great numbers about Suffolk, Essex, and the Isle of Wight.

The nervous system is not usually affected by it in small doses, but large doses cause headache, with hurried breathing and quickened pulse. Liebrich has shown that the Spanish fly, by administration of its active principle, will heal that destructive ulceration of the skin of the face which doctors call "lupus," and without any formation of unsightly scars; also when applied for leprous eruptions on the skin the diluted tincture has been remarkably useful, as well as in other scaly, cutaneous affections.

"*Cantharus pilulam*" was a Latin proverb which signified that the Cantharis insect of the ancients rolled pieces of asses' dung backwards into the shape of pills.

A vinegar of Cantharides is dispensed by druggists, of which if one part be mixed with four parts of rose-water and a tablespoonful of spirit of wine, five fluid ounces in all, this will make an excellent wash for strengthening the hair, also to prevent its falling off. The head should be sponged with tepid water after applying such wash a few times, to prevent the Cantharidin from accumulating, particularly if any oily combination is also employed. Vinegar of Spanish fly if applied with a brush in several successive coats will speedily blister the skin. Its modified use in this way can alleviate severe neuralgia or local rheumatism if the vinegar be diluted

so as merely to stimulate redness of the skin, helping chilblains likewise by such an application. For premature baldness, or falling off of the hair, an excellent lotion may be also made with eau de Cologne, one ounce, tincture of Spanish fly, one and a half drachms, tinctures of rosemary and lavender, of each ten drops. The scalp should be gently rubbed every day with some of this lotion applied on a small sponge, or a piece of flannel.

Cantharidin is found, further, in the potato beetle. It is to be remembered that the reduced tincture (H.) of Spanish fly, third decimal strength, in a dose of six or eight drops with water three times in the day will medicinally cure skin diseases signalized by watery blisters, as well as burns. Given in this way it does not favour blistering, but disperses the same if occurring as disease, or by accident.

Reverting to the Blue-bottle or Flesh fly (*Musca vomitoria*), it must be said that this insect, so generally detested because of its loathsome maggots, is most useful to man as rapidly dispelling putrefactive matters. Linnœus taught that three Flesh flies will consume a dead horse as quickly as a lion could do.

"*Aquila non captat muscas*," is the armorial motto of the Graves' barony: "The lordly eagle does not deign to catch flies, any more than the large-minded man occupies himself with empty frivolities." "*On attrape plus de mouches avec le miel qu'avec le vinaigre*," says a French proverb. In *Alice Through the Looking Glass*, three remarkable flies are described with charming humour; the "Rocking Horse fly made entirely of wood, which lives on sap and sawdust, being very bright and sticky." Also, "the Snap-Dragon fly with a body made of plum-pudding, wings of holly leaves, and the head of which

is a raisin burning in brandy:" this creature is said to "live on frumenty and mince pie," whilst making its nest in a Christmas box; and the "Bread and Butter fly, with a crust for a body, thin slices of bread and butter for wings, and its head a lump of sugar;" the diet of which odd creature is "weak tea with cream in it."

FOWL.

THE Fowl is in Latin, *Gallus domesticus.* Barndoor fowls, with which we are all so closely familiar, lend themselves, cock and hen, to medicinal uses.

In the primitive Saxon leechdoms it was ordered: "For asthma, to take chicken meat and seethe it in wine, then add oil which is made of French nuts, and let the man drink this." Pillows for the sick, and bolsters stuffed with the feathers of fowls were also then in vogue, though feather beds are of more modern date. The old Latin word for "pillow," or "cushion," was *pulvinar*, showing that in classic times it was stuffed with (*pulvis*) dust. In the *Rich Storehouse of Medicines* (1650), "a good medicament" was advised, "for an extream heat in the face: take a penyworth of capon's grease, and melt it and strain it through a fine linnen cloth, and let it stand to cool a quarter of an hour; then put into it a penyworth of brimstone finely bruised, and a penyworth of ginger beaten to powder, and mingle them with the capon's grease and make an oyntment thereof, and with the same let the patient anoynt his face when he goeth to bed; and in the morning let him wash his face with rosewater, lukewarm, but in any case let him take heed that he pick not his nose with his fingers, for if he do it will greatly hurt him."

Also, as a quaint and "experienced medicine for the

plague: take a cock, a chicken, or a pullet, and pull the feathers clean off the tail so that the rump may be bare; and then hold the rump or bare place to the sore, and immediately you shall see the cock, chicken, or pullet gape and labour for life, and in the end it will dy. Then take another cock, chicken, or pullet again and do the like, and if the same dy likewise then take another, and so do as aforesaid; and let the party grieved be applyed therewith as aforesaid as long as any of them do dy."

Similarly to the above, Dr. Stacey Jones, of Philadelphia, wrote as lately as 1894: "For snake bite (and perhaps our best hope in case of a mad dog's bite) is to procure half-a-dozen fowls, pluck the feathers from the fleshy part of one and tear off the skin from that part, applying the raw surface to the bite. The first fowl will die in ten seconds, the second in two minutes, the third in six minutes, the fourth in ten minutes, the fifth will become giddy but will not die; the poison is extracted, the patient saved."

Idem, "An approved good medicine to break the stone: take a cock of a year old and open him, and you shall find in his maw small white stones which, when you have found, wash them very clean so that there remain no filth at all amongst them; then take them and beat them in a brazen mortar to a very fine powder, and then put it into the best white wine that may be had; and then let the party grieved drink thereof every morning fasting, and this will break the stone and cause it to avoid in shivers" (acting, it may be well supposed, by the alkaline lime and other earthy salts of which these concretions have become composed).

In the *London Pharmacopœia* (1696), it was ordered that a jelly made of an old cock, sheeps' feet, and

bullocks' feet, "boyled eight or ten hours in a close vessel, will be excellent against consumption." Also, "Cock broth made of an old cock, tired till he fall down, and boyled with analeptics (medicines which cherish the nerves) till the flesh falls off, and then strained, this cures consumptions, colicks, coughs, the bloody flux, ulcers, and stoppage in the lungs." "If persons knew how good a hen is in January," runs an old Welsh medical maxim, "none would be left on the roost."

Burns describes Dr. Hornbrook as having among his stock of medicines:—

> "Forbye some new uncommon weapons,
> Urinus, spiritus of capons:
> Or mite-horn shavings, filings, scrapings,
> Distilled *per se*."

Henri the Fourth, of France, gained popular applause for expressing a wish that every Frenchman should have a fowl for his *pot a feu*; concerning which some one else added: "*c'est la soupe qui fait le soldat.*"

"Poultry," says Brillat Savarin, "is to a sick man who has been floating over an uncertain and uneasy sea like the first odour or sight of land to the storm-beaten mariner; and the domestic fowl lends itself to so many metamorphoses of cookery that it is to the cook what canvas is to the painter." Nevertheless, M. Pluquet, in his book on the superstitions of Bayeux, remarks: "*Une poule qui chante le coq, et une fille qui sifle, portent malheur dans la maison:*"—a maxim repeated in the folk-rhyme of most of our English counties: "A whistling woman and a crowing hen will frighten the devil out of his den" (or, "are liked by neither God nor men").

Former doctors in the United States of America would treat certain throat affections with a lohoch

applied by the end of a long feather from a cock's tail. This application became developed into a gargle, and was presently known as a cocktail. Then the gargle gave place to a tonic dose concocted of bitters, vermoute, and liqueur, such as is now in familiar demand as an appetiser.

Cocks were largely employed for divination in ancient Greece and Rome; not only were auguries deduced from an inspection of their entrails, but the birds were supposed to predict events by pecking grain from certain cards of significance placed before them. It is said the priests craftily compelled fate by putting wax imitations of grain on those cards which they did not wish to be chosen; and the birds were wise enough to prefer real grain before that which was a sham.

The Christian Poet Keble writes, in *Lyra Apostolica* (1836), of the weather Cock on a church steeple as:—

> "Celestial raised in other days to tell
> How, when they tired of prayer, apostles fell."

Burton moralized in his *Anatomy of Melancholy* that, "The hen feeds on the dunghill all his daies, but is served up at last to his lord's table; the falcon is fed with partridge and pigeons, and carried on his master's fist; but when he dies is flung to the muck-hill, and there he lies."

The dung of the hen was supposed to have all the virtues of pigeons' dung, but in a lesser degree. A dose thereof was from half a drachm to a drachm each night and morning for from four to six days. Concerning any starveling, gawky child there is a Cornish saying: "Like Nanny Painter's hens, very high upon the legs." And among popular superstitions in Cornwall is one widely believed—that no person can die easy on a bed made of fowls' feathers, or the feathers of wild birds.

Chicken flesh contains chemically but little osmazome, and is the least stimulating of all animal foods; its broth, when simply made, is well adapted for irritable stomachs. In New England the wise men declare that the blood of a perfectly black hen will cure rheumatism if applied externally.

When required "for the table," as Dr. King Chambers teaches, "a young and tender fowl may be known before plucking by the largeness of the feet and of the leg-joints; also when a fowl appears at dinner with a thin neck and violet thighs, it will be wise to decline being helped to a leg." Quoth the *Comic Latin Grammar:* "*Pectoribus inhians, molles en deserit alas,*" which means, as translated by an eminently practical schoolboy, "Intent upon the breast, lo! he deserts the tender wings." An old almanack of 1615 gives warning:—

> "Do thou not eat foule, I entreat,
> That moorish * is, and raw;
> And milke, though pure, do not endure;
> † Of phisicke stand in awe."

It was a proverb of Peter the Martyr that, "White hens lay lucky eggs." The great Lord Bacon did not think it beneath him to write a cookery book. In its pages are minute directions for preparing "Chicken in beer," this being the "China ale" of subsequent writers.

FOX.

THE Fox (*Canis Vulpes*), is a crafty, lively, libidinous animal, of nocturnal predatory habits, whose puppies are born blind, and the smell of whose urine is exceedingly strong. Bartholomœus Anglicus wrote in 1250, "A fox is called *Vulpes*, and hath that name as it were for

* "Moorish," strong-tasted.

† "*Livida me macies sumpto medicamine carpit.*"

wallowing feet aside, and goeth never forth straight, but always aslant, and with fraud. The fox feigneth himself tame in time of need, but by night he waiteth his time, and doeth shrewd deeds: and though he be right guileful in himself, and malicious, yet he is good and profitable in the use of medicine."

Among the Saxons a tooth drawn from a living fox was thought to be an excellent cure for inflammation of the leg, if it were wrapped in a fawn's skin, and carried as an amulet.

In the *Medicina de Quadrupedibus* of Sextus Placitus (1538) it may be seen that many other virtues were ascribed to different parts of this animal. By the *Rich Storehouse of Medicines* it was directed "for one that is taken with the palsie, though not the shaking palsie, take the bloud of a fox as warm as it may be taken from him, and the bloud about the heart is best, but all the rest is good, and with some of the same bloud chafe the place that is taken, and then take the skin of the fox and put the raw side to the place where the palsie is: and so let it remain for the space of twelve hours at the least, for it hath been truly proved." Again, "take the lungs of a fox and dry them well, and beat them to powder, and then put a quarter of a spoonful thereof into a little new almond milk, or else into some other thin broth made of veal or mutton, and let the patient eat it: and this will preserve the lungs wonderful greatly. *Probatum est.*"

Pliny advised that if any man have a white spot as cataract in his eye, to catch a fox alive, cut his tongue out, and let him go; then dry the tongue and tie it up in a red rag, to be hung round the patient's neck. He further commends bits of old sailcloth from a ship-wrecked vessel to be worn for epilepsy, the heart of a lark

to be taken for colic, and hairs from a goat's chin for quartan ague;—admitting that he has no personal faith in such things, but orders them for imaginative, fastidious and rich patients who decline to pursue a more rational treatment.

At a village in Oxfordshire, within recent years, children were required to go, for the cure of whooping cough, the first thing in the morning to a hovel, at a little distance from their house, where a fox was kept, carrying with them a large can of milk. This they set down before the fox, and when he had taken as much as he cared to drink, the children were to share among them what was left. For a fellon (*felon*, little thief; *furunculus*, whitlow) it was told in *Saxon Leechdoms* "catch a fox, strike off from him whilst quick, that is, alive, the tusk or canine tooth; let the fox run away; bind the tooth in a fawn's skin, and have it upon thee." Also, in the same book we learn, "for hard drawn breathing which is oppressive, a fox's lung sodden and put into sweetened wine and administered, wonderfully healeth." That such a remedy should have been given from a healthy animal for disease in the corresponding human organ as long ago as in primitive Saxon times, remarkably illustrates the intuitive anticipation by our unlettered forefathers of a practice now extolled as of recent scientific research and discovery, *viz.*, that of cure by animal extracts.

So sensitive was Tycho Brahé that he always fainted at the sight (or smell?) of a fox.

About the human race in general, Man has been severely summed up thus:—

> "As foolish as monkeys till twenty or more,
> As bold as a lion till forty and four,
> As cunning as foxes till three score and ten,
> We then become asses, and are no more men."

Dr. King Chambers, in his admirable *Manual of Diet in Health and Disease*, has said, "to the curious gourmet affected with diabetes it may be told that Professor Bouchardat especially commends the flesh of carnivorous animals, and advises their trying cat, dog, and fox. The liver, however, of either animal should not be eaten; and by removing the fat a great deal of the rank flavour of these carnivora is avoided." If gnawing hunger troubles the patient it may be appeased by his chewing cocoa beans.

Southey has quoted Wirzung concerning an old remedy for palsy—"Take a fox, uncase (skin) him, and the bowels being removed, seethe him in a sufficient quantity of water, and bathe the sick person therein; but yet not before that the body be purged, it is not otherwise permitted."

FROG.

THE Frog *(Rana temporaria)* was formerly known as "Frosch" and "Frosk." This is the common brown frog; or red, as the French call him, for distinction from their green frog, which is much esteemed in France, Germany and Italy as an article of food. It is found generally on land in the summer season, whereas the green frog rarely leaves the water. This latter is larger than our ordinary brown frog, and of an olive green colour, with black spots, and three strongly marked longitudinal lines on the back. The red frog is very commonly used as food in the central parts of France, and its hindquarters are said to be as good in fricasee as those of the green frog (*Rana esculenta*). The ancient heraldic device of the Parisians was three frogs (or toads), and their city was Lutetia (a land of mud).

The Romans do not seem to have made much use of

frogs as food: and the physicians of the middle ages attributed to them deleterious properties. In the sixteenth century, on the Continent, frogs were served at the best tables. One Perdix is ridiculed, in 1550, by the author of *Devis sur la Vigné*—"*quand on lui apporta de grenouilles en facon de poullets fricassés.*"

Dr. Salmon wrote, in 1696, "The French eat the hinder part of the green frog, of which the flesh is good against coughs, and such as are hectick. Water and land frogs have one and the same virtues."

Continental physicians have long employed the flesh of these amphibiœ, variously prepared, in the treatment of several diseases. Broths made therefrom have been considered restorative, diluent, analeptic, and anti-scorbutic, being prescribed in chest affections, pulmonary consumption, skin disorders, and other maladies.

Some of the earlier doctors adopted very absurd notions and practices in this respect. Timotheus placed frogs cut in two over the kidneys of dropsical patients, with a view to attract the accumulated serous fluid. "We have heard," said Dr. Stephenson (1838), "of applying a brickbat in certain cases to a particular part of the human body, and we presume that its curative efficacy would be fully equal to that of the animal cataplasm here advised." Dioscorides presaged that the flesh of the frog, when cooked with salt and oil, would be an antidote to the poison of serpents; and Arnold said the heart of this creature taken every morning in the form of a pill, cured a fistula in the region over the stomach, which had resisted many other remedies.

Other mediciners recommended in epilepsy the liver of a frog calcined in an oven, on a cabbage leaf, between two plates, and to be swallowed in peony water.

Concerning grenouilles, in *La Cuisiniere de la Campagne*

et da la Ville, Paris, 1846, to make *Cuisses de Grenouilles frites*, "*vous les mettez mariner crues pendant une heure avec vinaigre, persil, ciboules entieres, une feuille de laurier thym; ensuite vous les mettez egoutter, et les farinez pour les faire frire; servez garni de persil frit.*"

In *A Thousand Notable Things* we read "The virtue of frogs used physically is wonderful and scarcely known; all parts of him are good and profitable for mankind; the lungs are preservative against the falling sickness, and so is the liver. This latter, dried and mixed with honey, if applied to the toothache is a present cure; the gall dissolved in honey cures the flux called the dysentery; the blood is good against growing of hairs; their fat dropped into the ears cures deafness; the spawn of them put into a linen cloth applied to the hemroides or piles, is excellent. The same kills the itch of the hands, and redness of the face, and is good against burnings. One who was troubled with a fistula of the lower region of the stomach was perfectly cured by swallowing, on four or five mornings, the hearts of frogs."

Respecting Dr. Thos. Willis (Christ Church College, Oxford, and Sidley Professor there) it has been well said he was the first to reform the *Materia Medica*, and to adopt something like scientific methods; yet he ordered for colick to take of the oil of earthworms, or of frogs, as much as will suffice, and anoint the pained part, after first fomenting it with a pultess of bruised herbs made hot in a pan over hot coals, with the oyl of earthworms, or of frogs; then lay upon the part a thin sheet of brown paper dipt in the oyl. Felix Platter, says old Burton, tells of one who thought he had some of Aristophanes' frogs in his belly, crying "brecc-ekex-coax-oop-oop," and who for that cause studied physick

seven years, and travelled over most part of Europe to ease himself.

The French habitually eat green frogs, taking only the hind legs, skinned, and with the claws twisted together. In this form the creatures resemble delicate little lamb cutlets, and are very palatable. About many parts of France, and at Vienna, they are fattened up in froggeries (grenouillieres) constructed for the purpose; they are first caught with lines baited with small pieces of scarlet cloth, or in nets, or are raked from the mud. *The English Dancing Master* (1651) contains a quaint rhyme:—

> "The rose is red, the grass is green;
> Serve Queen Bess, our noble Queen!
> Kitty the spinner
> Will sit down to dinner
> And eat the leg of a frog."

In the North of Lincolnshire the sore mouth with which babies are often troubled is called the "frog."

Sir John Poley, who served in the Low Countries under Christian, King of Denmark, adopted a golden frog as his device. Most probably reference is made to his name in the curious homely ballad, "Froggy would a wooing go; 'Heigh ho,' says Roley; With a Roley, *Poley*, gammon and spinach; 'Heigh ho,' says Roley." This well-known song seems to have been borrowed from *Melismata*, London (1611), or from *Pills to purge Melancholy* (1719). "In 1580 was licensed a most strange weddinge of the frogge and the mouse," as appears from the books of the Stationers' Company, quoted in Warton's *History of the English Poets* (1840).

It is in the autumn, just when they plunge into the water where they would pass the winter, that the frogs are most esteemed, being now fatter and more delicate than at other times; and in France epicures

restrict themselves to the hind quarters, which are dressed with wine, like fish, or with white sauce; sometimes they are fried or spitted.

The French are not really peculiar in thus eating frogs, since the city of New York stands also pre-eminent for its frog eating propensities through a season lasting from the first of June to the end of August. Frogs can then be had at nearly every first-class restaurant; the Americans, like the French, eating only the legs.

At one time within the last few years Messrs. Keene and Ashwell, of London, made considerable quantities of frog oil, by crushing the creatures and boiling them in oil, which was to be used as an outward application in cancer. By the old pharmacopœias this oil was much prescribed. Likewise the *Sperma ranarum*, or spawn of frogs, obtained a place in our old dispensatories. "Frog spawn," says that of 1696, "is cooling and anodyne; it kills the itch, tetters, ringworm; helps burns, scalds, inflammations, erysipelas, red faces, and the gout; stops the flux of the hemorrhoids, terms, whites, and gonorrhœa." "Frog's spawn," tells *Folk Lore*, "out of the dykes, buried for three months in a crock, with a slate on the top of it, then taken up, and found to be pure water, was used successfully for the cure of chronic rheumatism by being perseveringly rubbed in where the pains were felt." Also, "anyone who is desirous of curing sore eyes is taught (in Aberdeenshire) to catch a live frog and lick its eyes with his tongue, after this he has only to lick any diseased eye, and the cure thereof will be effected."

The Indians of the Pacific Coast envenom their arrows with a secretion which exudes from the skin of a small frog, and which, by a certain process of

decomposition, they convert into a powerful blood poison. It is said that when these tribes concoct the baneful stuff for use in time of war, it has been their practice to test its deadly efficacy, not on the lower animals, but on the old women of their community.

After a fashion the frog sings, though we call the song a croak. "I wonder," says Mr. Wood, "what name the frog would give to much of our singing?" When it makes this music it sinks itself under the water with the exception of its head, opens its mouth, lays its lower jaw flat on the water, and sets to work as if he means to make the best use of his time. If a fly passes that way, and sufficiently near, the insect disappears as if by magic, for the long tongue of the frog has whisked it off to its destruction; this elongated tongue is covered with a gummy fluid, and is thrust forth so rapidly as almost to defy the closest observation.

In 1881 Dr. Harley resuscitated a frog one hundred hours after what seemed to be death (as far as could anyhow be ascertained, even from inspecting the circulation of blood under the microscope) caused by the strong poison woorara, and when all signs of actual life had ceased. It takes thirty hours to kill a frog with such a dose of snake venom as would infallibly destroy a rabbit in ten minutes.

The mucus (spawn) which envelops the eggs of frogs swells to an enormous volume when it has free access to water. It has been found on wet ground in the spring, and mistaken for a species of fungus, but this being really some of the said spawn which had been swallowed by large crows or other such birds, and afterwards vomited, from its peculiar property of swelling to an enormous size in their bodies. Country persons have thought it the substance of shooting stars.

Zwelfer a declaré que les trochisques de crapaud l'avaient preservé de la peste ainsi que ses domestiques, et ses amis, et avaient soulagé, meme gueri des pestiferes. On sait que Van Helmont faisait appliquer sur le peau ce singulier remède. "The epicures of King Charles the First's London ate frog pies with infinite gusto," says Jeaffreson.

GALL.

THE Gall (*Fel*) of an animal is none other than its bile as secreted by the liver, and stored in the gall bladder for use during the digestion of food within the intestines after this has left the stomach. Such gall, or bile, is a viscid, dark, greenish-coloured secretion, of the consistence of thin black treacle, and proverbially most bitter of taste. It serves to saponify fats in the food, to prevent putrefactive changes therein, and to stimulate a proper activity of the bowels. Bile does not find its way into the stomach proper except as a symptom of upset.

Ox-gall, *Fel bovis tauri*, is prescribed remedially in cases where a deficiency of the natural bile seems to be indicated, and in some forms of chronic constipation, but too large a dose will bring on diarrhœa. As the drug would lose its character by first passing artificially through the acid stomach, mediciners protect its preparations by covering them with a horny coating of keratin, on which the gastric juice of the stomach does not act, and in this way the gall given remedially is not dissolved until it reaches its proper sphere within the highest intestines, of which the secretions are alkaline. The gall consists chemically of biliary matter, mucus, alimentary extract, chloride of sodium (*i.e.*, common salt), lactate, and phosphate of soda, and phosphate of lime.

It contains an excess of the sodium salts over