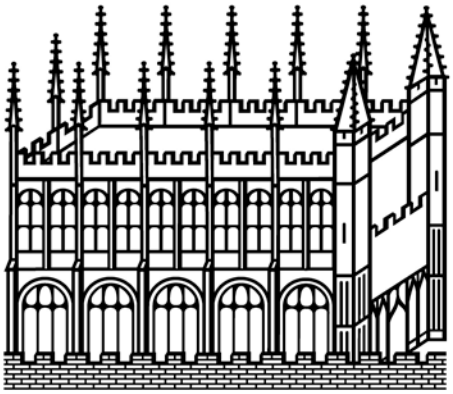


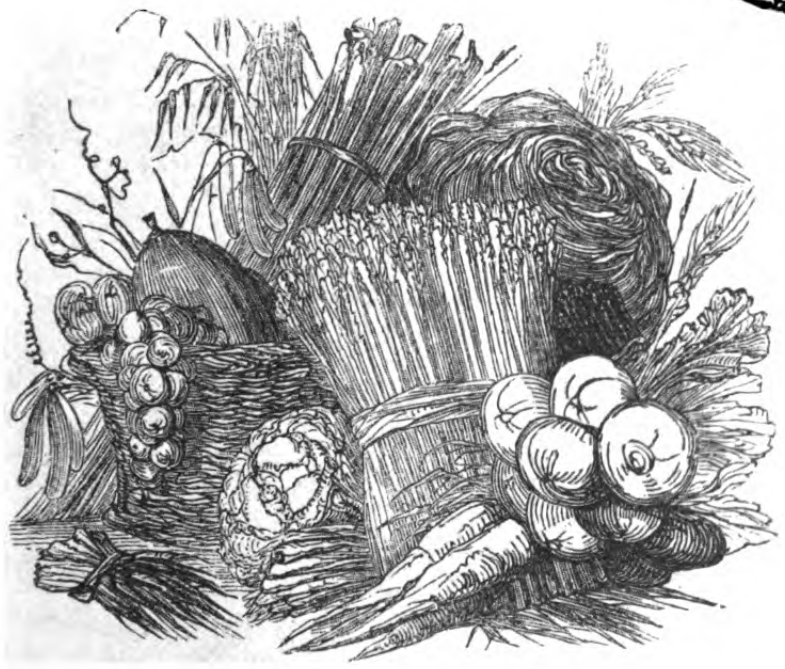
THE FARM AND THE GARDEN:

AN ACCOUNT OF

EVERY VEGETABLE PRODUCTION CULTIVATED FOR THE TABLE,

BY THE

PLOUGH AND THE SPADE.



LONDON:

T. M. CRADOCK, 48, PATERNOSTER ROW.

1841.

G. WOODFALL AND SON, ANGEL COURT, SKINNER STREET, LONDON.

CONTENTS.

THE FARM AND THE GARDEN.

INTRODUCTION.—IN the following pages we purpose to give our readers an account of those vegetables which are most commonly used as food by the natives of the various countries of the globe; dwelling more especially upon such productions as are either naturalized in our own country, or being imported in large quantities, may be almost classed among the necessaries of life to us. The subject is one of large scope and of great importance. We read in our early histories that the Romans, when they invaded England, found the natives supporting themselves upon the rudest fare; uncultivated roots, and wild fruits; as we read, we marvel at the tale, and the only way of solving the difficulty is to suppose that our brave ancestors lived chiefly upon animal food. It is true that there are many esculent roots and nourishing herbs indigenous in Britain, but if the art of cultivating these was unknown, their chance and uncertain produce must have been speedily exhausted.

Undoubtedly we owe much to the Romans; the appropriation and civilization by them of our island forms one of the numerous instances in which lasting and certain good has sprung from temporary evil; the seed of industry sown by the conquerors has grown into a wide spreading tree, bearing the noblest fruits of mental and physical improvement, and in its beautiful luxuriance hiding from our view the command not to "do evil that good may come."

We are much inclined to doubt whether the description given by Cæsar and Tacitus of the condition of the Britons when the former "came down like a wolf on the fold" be not an exaggerated one. It does seem extraordinary that the architects (if we may so term them) of Stonehenge and Abury should not have been acquainted with the means of improving the natural productions of their soil; the earth was tilled in other countries as early as the erection of these stupendous monuments, why was it not so in our own?

Britain must have always been a fertile country, and this its character must have been well known to other nations,

or a tribe of people driven from their abode on the banks of the Loire by an inundation of that river, would not have chosen it as their permanent home; nor would such a tribe have been welcomed here, and received lands allotted to them, as we read was the case. But, as we shall see in the following pages, the habits of a people as regards the food by which they subsist are as mutable, or rather progressive, as their habits of personal and domestic convenience.

We could go much deeper into this extremely interesting subject; we could shew that Cæsar came not hither in the ignorant spirit of conquest alone, but that he came to Britain as to an island renowned from very remote ages, and the acquisition of which would not only add lustre to his military fame, but would combine the palm-branch of religion with the laurel of the victor.

Our subject naturally divides itself into several heads, which may again be scientifically subdivided.

First,—*Farinaceous* plants are those affording evidently "a non-fibrous and granular substance, which, when dried, may be pounded into meal or flour, and which, if boiled in water, will form with it a pulpy substance." The larger is the proportion of this farinaceous matter, the more nourishment is there in the vegetable, and the better is the latter adapted for human food.

Farinaceous matter is contained in the seed, the stem, or the root of a plant. We will first speak of farinaceous seeds, which are divided into two classes; the first class comprehends the seeds of annual plants, grasses or plants containing similar properties. They are called the *Cerealia*, from Ceres, the goddess of corn, which name is applied in different countries to the different kinds of grain-bearing plants upon which the inhabitants of each country chiefly depend for food; as wheat in England, oats in the northern lowlands of Scotland, rye upon the southern shores of the Baltic sea, and maize in America.

The second division of farinaceous seeds is the produce of plants which are mostly annuals, but distinguished from the former class by bearing their seeds in pods or legumes; hence they are termed *leguminous*, and are likewise known by the general name of *pulse*.

The chief corn plants, or cerealia, used for food, are wheat, rye, barley, oats, millet, rice, and maize; these, such as they are found under cultivation, do not grow wild in any

part of the earth; they are conveyed, cultivated, and improved by man, and wherever we find the corn-plants, we may conclude that civilization is, or has been. Other seeds are wafted by winds, borne by currents, or carried by birds, but the corn plants follow the course of man alone. Let us take a rapid view of their present distribution throughout the globe before we proceed to particular species.

In the higher regions of latitude, where the winters are long and the frosts intense, agriculture can be but partially pursued. The utmost limit of the culture of grain in Siberia reaches only to the sixtieth degree of latitude, in the eastern parts, only to the fifty-fifth. In the southern districts adjoining the Wolga, the land is so fertile that one sowing of the seed will ensure five or six crops in as many succeeding years, no manuring being necessary, and the seed which is shed during the reaping being sufficient for the next year's produce, with no other labour than merely harrowing the land in the spring. Buck-wheat is the grain commonly thus cultivated; but Europe is indebted to Siberia for a particular description of oats, which are considered excellent, and at Yakoutch barley sometimes arrives at maturity.

In the western districts of Lapland scanty crops of barley are obtained, but for the most part the inhabitants subsist upon rye flour obtained in barter for their dried fish.

Although Kamschatka lies farther south than Siberia, no attempts to cultivate the cereal grasses there have ever proved successful; probably from the nature of the soil rather than the temperature of the climate; since in some spots, where the land is of a better quality, esculent vegetables, carrots, turnips, beet-root, and some others are raised without difficulty.

Barley and oats are the kinds of grain the culture of which extends farthest to the north in Europe; and these form the principal sustenance of the inhabitants of Norway and Sweden, of a part of Siberia, and even of Scotland.

Descending southward, in the northern part of the temperate zone, rye is found in the countries bordering on the Baltic sea; in these it forms the principal object of cultivation; barley being raised, as with us, only for the purpose of brewing, and the use of oats being limited principally to the feeding of horses. In these districts wheat also is grown, but chiefly for export trade.

Somewhat farther to the south, rye in a great measure disappears, and wheat becomes the principal material used

for human food. This geographical band comprehends France, England, the southern part of Scotland, part of Germany and Hungary, and the lands of Western and Middle Asia.

Still farther southward, wheat is raised in great abundance, but we find maize and rice the great constituents of human food; as in Portugal and Spain, that part of France bordering on the Mediterranean sea, Italy, and Greece.

In Persia and Northern India, Arabia, Nubia, Egypt, and Barbary, wheat is still found, but maize, rice and millet are the principal human food. On the plains near the Caspian sea, in Georgia, rice, wheat, barley, and millet are raised abundantly, and with very little culture. In the more elevated parts of those districts rye is sometimes cultivated, but oats entirely disappear, the mules and horses being fed on barley.

In China and Japan rice is the grain generally cultivated, although the other kinds might be easily and successfully raised; this is more owing to the habits and tastes of the people than to physical causes.

In the countries lying between the tropics rice and maize are the common food of the inhabitants; rice in Asia, maize in America; in Africa, except in the British settlements, these two grains are used in nearly equal proportions. Wheat is found in some situations within the tropics; in the upper provinces of British India its quality is excellent, but the grain smaller than with us. Barley is likewise grown in some of the northern districts, but it does not attain size or plumpness; it is used by the native population in the form of cakes.

In America the highest limit for the cultivation of the Cerealia is 57° and 58° north latitude; in the plains there, barley and rye are brought to maturity; while on the eastern coast the same cultivation rarely succeeds higher than 50° or 51°. In the United States wheat and rye grow as in the more temperate regions in Europe; while in the south rice is very largely cultivated, and maize throughout the States. Canada produces wheat in great abundance.

We now pass southward to Mexico, one of the most interesting countries of the globe, whether we look to its past or future destinies. There wheat, barley, oats, and rye, are never cultivated at a lower elevation than from 2500 to 3000 feet above the level of the sea. On the declivity of the Cordilleras, between Vera Cruz and Acapulco, wheat

cultivation does not in general commence at a lower level than 4000 feet. Sometimes, as in the immediate vicinity of Xalapa, wheat is sown as fodder for cattle, but it produces no grain; while in Guatemala, which is nearer to the equator, and lies at a much lower level than Xalapa, the grain comes to full perfection. This variance from the usual rule Humboldt accounts for by the exposed situation of the district, and the prevalence of cool winds. For the same reason it is probably, that in Cuba, and likewise in the Isle of France, wheat is cultivated at an extremely slight elevation. The failure in the lower parts of Mexico may be owing to the total absence of rain throughout a large portion of the time when the plant is in the ground; artificial irrigation not being resorted to, as in Guatemala. Maize is the great cultivation of the Mexicans, who subsist upon this grain and upon Manihot, or Cassava; the consumption of wheat being principally confined to the white inhabitants of the towns.

In the southern hemisphere the order of cultivation is similar to that pursued in the northern. Wheat is commonly found in the southern provinces of Brazil, in Buenos Ayres, and in Chili. At the Cape of Good Hope this grain predominates, and the flour which it yields is of a beautiful quality. In Australia wheat is the principal object of cultivation; but in the southernmost parts, and in Van Dieman's Land, barley and rye are likewise to be found.

WHEAT.—*TRITICUM.*

TRIANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* GRAMINEÆ.

Of the Cerealia, Wheat first claims our attention, as the grain preferred for food in all countries where it can be obtained, although in none has it been discovered to grow spontaneously in a fit state for use. Wheat has indeed been traced in Persia, springing up in spots far remote from human habitation, but this circumstance proves rather the former civilization of the country than that the grain is indigenous there. In Sicily there is a wild grass called *Œgilops ovata*, which is found in particular districts. Professor Latapie, of Bourdeaux, affirms that having cultivated this seed, the plant has changed its generic character, and has made approaches to that of wheat. Sir Joseph Banks also having sowed some grains in his garden from a packet which was

sent to him labelled "Hill Wheat," obtained a good crop of spring wheat, the grains of which were of the ordinary size; the seeds which he had sown were hardly larger than those of our wild grasses. The only satisfaction obtained in answer to enquiries upon this subject shewed that they came from India, but from what part of the country, or what amount of cultivation, if any, they had received, could not be ascertained.

Many authors have referred to Egypt as the country whence corn sprung, grounded upon the lines of Homer:

"Then the far country waves with golden corn;
The soil untill'd a ready harvest yields,
With wheat and barley wave the golden fields."

ODYSSEY.

But this rather proves the cultivation of corn, not that it was indigenous; and we learn from the history of Joseph that corn was *sown* in Egypt in those early days. In the mythology of that country, Osiris was regarded as the inventor of agriculture, and Isis as the discoverer of wheat and barley; thus typifying the influence of the sun upon the labours of the husbandman, and perhaps pointing to India as the natural country of the grain ascribed to Isis. In the sepulchres of the Egyptian kings, the common wheat has been found, in vessels which were so perfectly closed, that the grains retained both their form and their colour.

The book of Ruth tells us that wheat was cultivated in Syria more than 3000 years back, and it also gives us the origin of the humane custom of allowing the poor to glean the stray ears after the reapers have finished their work.

According to Pliny, wheat was extremely fruitful in Africa, sometimes yielding a hundred and fifty fold. He informs us, that a procurator-general of Byzacium in Africa sent the Emperor Augustus Cæsar a plant of wheat, which had nearly four hundred straws springing from one grain, and meeting all in one and the same root. The territory about Leontini in Sicily, and the kingdoms of Granada and Andalusia in Spain, Pliny likewise mentions as rendering great interest to the husbandman.

The Greeks speak highly of the wheat which grew in Pontus. Italy soon became famed for her wheat, as far back even as the time of Alexander. Numa ordained that no prayers or supplications should be made to the gods

without an oblation of corn, or cakes made of meal and salt; the corn, from its being first sown till it was placed in the granaries, was supposed to be under the especial care of several divinities, while the blight to which then, as now, it was subject, was regarded as a sign of wrath on the part of their offended deities, and whenever it occurred, they submitted to the infliction, without attempting to provide a remedy.

At what period wheat was first cultivated in England we can only conjecture, and our suppositions respecting the persons who brought it here must be equally vague. This grain might be brought by the early Phœnician merchants who traded hither for tin; but in that case it was probably indigenous in their country. Possibly wheat might be brought to our island by the Iberian Celts who inhabited the coasts of Spain and Portugal, and who were perhaps the forerunners of the Phœnicians here. Cæsar found corn growing on our coast, but of what kind we are not informed. Wheat appears not to have been cultivated in all parts of England even so late as the reign of Mary, as Tusser writes:

"In Suffolk again, where as wheat never grew,
Good husbandry used, good wheat land I knew;
This proverb experience long ago gave,
That nothing who practiseth, nothing shall have."

This is a reproach from which the Suffolk farmers have now certainly freed themselves.

Several species, and a still greater number of varieties, of wheat are now to be found, many of which may be referred to influence of climate and modes of culture. There are but two sorts generally and extensively cultivated in this kingdom, the one called spring or summer wheat, the other winter or Lammas wheat, from the seasons of the year at which they are sown.

Spring or summer wheat—*Triticum æstivum*—is supposed to be a native of Siberia, in the land of the Beschkirs. It is the least hardy of the two kinds, has longer beards or awns, and a smaller grain than winter wheat. It is cultivated in the more southerly and midland districts, and the advantage of it consists in the security against the effects of a rainy and cold spring, when winter-sown wheat would be irretrievably injured; this delicate, but rapidly growing

species may then be depended upon. It is also said that this kind of wheat is not subject to blight.

Winter, or Lammas wheat—*Triticum hybernum*—is more vigorous in the stem, more erect and thick in the ear, and, compared with the other kind, is destitute of beard or awn, for which reason its bloom is more conspicuous. There are varieties of this species distinguished according to the colour of the tunic which envelopes the grain. Red wheat is commonly said to be more hardy than the white, but the plant is not so productive, nor is the flour of so good a quality.

Duck-bill, or conical wheat—*Triticum turgidum*—has been attempted in England, but with no profitable result.

Egyptian, or many-spiked wheat—*Triticum compositum*—called also "corn of abundance," is principally cultivated in Egypt and Italy. It is probably a native of the north of Africa, and resembles spring wheat in its habits, except in its distinctive peculiarity of being branched, so that the ear is made up of several spikelets. It will bear great degrees of heat and drought uninjured, in situations where other kinds would be destroyed.

Polish wheat—*Triticum Polonicum*—was partially cultivated in England in the latter part of the seventeenth century, but is now only found here in botanic gardens.

Spelt wheat—*Triticum spelta*—is imagined to have been the Triticum of the Romans, and the Zea of the Greeks, although the latter name is now given to maize, a grain unknown to the ancients. This variety may be grown upon much coarser soil, and requires less culture than the first two kinds. In many parts of Germany, in Switzerland, the south of France, the north of Africa, and at the Cape of Good Hope, it is grown abundantly. In Spain, when barley is scarce, it is given to horses. There are two varieties, the awned and the awnless.

One-seeded wheat, or St. Peter's corn—*Triticum monococcum*.—This small species is chiefly used in the mountainous parts of Switzerland, and as it contains less gluten than the common sorts, it answers better for being boiled into gruel than for bread. The straw, being both hard and firm, is excellent for thatching; the spike contains only a single row of grains.

The New World, as it is called, is indebted to its European conquerors for the gift of wheat, none of the cereal grasses having been found in cultivation by Cortez. The first

introduction of wheat in Mexico is said to have been by a slave of the conqueror, who, in 1530, discovered three or four grains accidentally mixed with a quantity of rice. These he carefully sowed, and hence sprung the ample harvests now reaped in that country. Cortez himself was so well satisfied with the fertility of his new government that he writes to the king of Spain, "I beseech your Majesty to give orders that no vessel set sail for this country without a certain quantity of plants and grain." Would that he had always proceeded thus, rather than to "make a solitude and call it peace."

A Spanish lady, Maria D'Escobar, wife of Diego de Chaves, was the person to whom Peru owes the blessing of wheat. By carefully distributing the produce of a few grains which she carried to Lima, and continuing this plan for several successive harvests, she rendered the cultivation general, and deserves the gratitude of posterity. It is not exactly known at what period this benevolent lady introduced wheat to Peru, but it is probable the event did not occur until after it had been carried to Mexico, as in the year 1547 wheaten bread was hardly known in the important city of Cuzco.

The first grains of wheat which reached Quito were conveyed thither by Father Jose Rixi, a Fleming, who sowed them near the monastery of St. Francis, where the monks still preserve and show, as a precious relic, the rude earthen pot wherein the seeds first reached their establishment.

Thus has this useful grain been disseminated to all parts of the world, sometimes by the virtuous benevolence and industry of man, sometimes by the agency of the bad passions of the conqueror; evil has produced its certain result of good, and the instruments of this must be answerable for their own deeds.

THE OAT.—*AVENA.*

TRIANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* GRAMINEÆ.

This grain is the hardiest of all the cereal grains that are cultivated in Great Britain; it can also be raised in situations and soils where neither barley nor wheat will succeed. The form of the ear is not only remarkably elegant, but it is admirably adapted to ensure fecundity; light and air can visit, and rain can wash, each individual grain, while the

drooping position of the awns prevents the rain from injuring them, and this grain is consequently not liable to the diseases which attack barley and wheat.

The kinds of oat generally cultivated in England are the *Avena sativa, Avena orientalis,* and *Avena chinensis.*

The *Avena sativa,* which species is commonly cultivated, has several varieties, termed white, Poland, and black husked. This grain thrives well on any soil, ripens early, and is very prolific.

Tartary oat—*Avena orientalis*—is now extensively grown in Berkshire; its colour when ripe is extremely beautiful,—bright golden.

China or skinless oat—*Avena chinensis*—unlike the others, has its grain loose or free in the husks. "It was introduced in 1830, by Thomas Derenzy, Esq., who obtained the seed from Rotterdam, whither it was imported from Shantag, a remote district of China. When thrashed from the sheaf, it is exactly like oat grits, and it is fit for immediate use for culinary purposes, the grain being quite free from every particle of rind or husk. The flavour is delicious, and it contains much more farinaceous matter. It is remarkably hardy, and well adapted for this climate."

The nutritive quality of oats is smaller in a given weight than that of any other cereal grain; the small proportion of saccharine matter also renders it very difficult and unprofitable to convert this grain into malt. Oats are now principally used for feeding horses and fattening poultry in England, while in Scotland oatmeal, prepared by various processes of cooking, composes a large proportion of the food of the inhabitants of Scotland, and particularly of the better fed portion of the labouring classes.

The time and mode of the introduction of oats into England are equally unknown, and some writers have expressed their opinion that this grain is indigenous with us.

The wild oat, *Avena fatua et sterilis,* which is certainly indigenous to this country, is an extremely troublesome weed. The seed may remain under ground for a considerable time, during a century or more, without losing its vegetative power, and ground which has been lying in grass from time immemorial has, upon being broken up, produced the wild oat abundantly. The Avena sterilis, sometimes called the *animal* oat, is noted for the hygrometrical properties of the awns, which assimilate its movements to those of an insect.

"When the animal oat is ripe it falls out of its glumes, and in warm weather may be seen rolling and turning about on its long ungainly legs, as they twist up in consequence of their hygrometrical quality. It necessarily advances as it turns over, because the long stiff hairs upon the body catch against every little projecting point on the surface of the soil, and prevent its retreat. Nothing can be more curious than to see the path of a garden walk covered with these things tumbling and sprawling about in different directions, until their awns are so twisted that they can twist no further. They then remain quiet till the dews fall, or they are moistened by a shower, when they rapidly untwist, and run about with renewed activity, as if they were anxious to get out of the way of the wet."

We find no mention made of oats in Scripture, which expressly states that Solomon's horses and dromedaries were fed with barley. From this we conclude that oats did not grow in Egypt or Syria. They are slightly mentioned by Virgil as follows:

"Or change your seed, and for each crop of wheat,
A crop of vetches, peas, or beans repeat.
Flax, oats, and poppies burn the tender soil,
Yet, sown by turns, they 'll recompense your toil."
GEORGICS.

Although Pliny takes no notice of the cultivation of this grain in Italy, but observes that in some places it is made into bread, yet the use of oats as a provender for horses appears to have been known in Rome as early as the Christian era, as we read that Caligula fed his favourite horse with gilt oats out of a golden cup.

In our own country, Gerard writes in 1597, that oats are the chief bread-corn in Lancashire, where they call the grain *haver*, and for want of barley, likewise make a drink of it. The inventor of this drink, upon which Hoffman wrote a treatise, was called Johannes de St. Catherine, and he is said to have kept himself alive by it to the age of a hundred and twenty years without disease. There is no doubt great virtue in water gruel, but really we must doubt this surprising effect.

BARLEY.—*HORDEUM.*

TRIANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* GRAMINEÆ.

Next to wheat perhaps this grain is the most important to our island, as although its use for bread-corn has much diminished of late years, its employment for the production of stimulant liquors has materially increased.

In one respect barley is of more importance to mankind than wheat. It may be propagated over a wider range of climate, bearing heat and drought better, growing upon higher soils, and coming so quickly to maturity that the short northern summers, which do not admit of the ripening of wheat, are yet of long enough duration for the perfection of barley. It is the latest sown and the earliest reaped of all the summer grains. Linnæus relates that in Lapland he observed the commencement of barley harvest only six weeks after the grain had been sown. Barley requires no moisture, and this property fits it for those countries where the summer is short, as in Lapland, and where wet is of very rare occurrence from the termination of the spring rains, after which time seed time commences, until the autumnal equinox, previous to which the harvest is reaped.

Wet is extremely hurtful to barley, even heavy dews, if frequent, are injurious; and it is very liable to be beaten down by rain when in ear, in which case germination of the grains will take place, and the produce be destroyed. This facility of germination is the property so favourable to its conversion into malt, which is, in fact, simply the process of germination induced and carried forward up to, and not beyond the point when the maximum quantity of saccharine matter is developed in the grain.

Barley differs materially from wheat in containing more starch, far less gluten, and about seven parts in a hundred of saccharine matter ready formed, which latter constituent wheat does not possess previous to germination.

Botanical writers enumerate four distinct species of barley; of these there are many varieties produced by differences of soil, climate and culture. Other authors however consider that there are only two cultivated in the farm that are properly distinct, *Hordeum hexastichon* and *Hordeum vernum*.

Spring barley—*Hordeum vernum*—is the kind most commonly cultivated in England. Of this species farmers dis-

tinguish two sorts; one the common, and the other the *rath-ripe* barley; the latter, however, is merely a variety occasioned by long culture on warm gravelly soils. Siberian barley, another variety, was brought into culture in 1768; it is of a broader blade and deeper green than common barley. The ears are shorter, containing fewer grains, and it arrives at maturity about a fortnight earlier than other kinds. *Chevalier* barley, so named from the gentleman who first introduced it, has of late years been held in high estimation, as being heavier and more productive than the common kinds.

Winter or square barley—*Hordeum hexastichon*—is the second species. This is principally cultivated in the northern countries, and in Scotland. The grains are large and plump, and the spike is thicker and shorter than the last-mentioned species, being seldom longer than two inches, but having six rows of grains. Maltsters in the southern division of the kingdom do not like this barley so well as that more usually cultivated, but in Scotland this is considered a prejudice.

Long-eared or two-rowed barley—*Hordeum distichon*—is partially cultivated in every part of England. The ear is flat, the husk of the grain thin, and its malting qualities are excellent, but the ears being long and heavy, it is more apt to be beaten down than the other kinds.

Sprat or battledore barley—*Hordeum zeocriton*—has broad and short ears with long awns, the grains lying closer together than those of other kinds.

The county of Norfolk is noted for the quantity and excellence of the barley produced there, and the time for sowing used to be regulated by a maxim transmitted from father to son;—

> "When the oak puts on his gosling grey,
> 'Tis time to sow barley night and day;"

but the sowing now takes place earlier than the oak puts forth its grey buds. The budding and leafing of the birch trees is, in Sweden, considered an indication of the proper time for barley sowing.

The native country of barley is as little known as that of wheat; but it is evidently a native of a warmer climate than Britain. Some travellers have mentioned it as growing in a wild state in distant parts of the world; but as the hardiest varieties of the cultivated grain have never yet been found

to propagate themselves during two succeeding years, it is probable that these plants were some of those grasses which bear a strong outward resemblance to barley, but which cannot, by any degree of culture, be brought into use as human food. One of the grasses, the *Hordeum murinum* of Linnæus, known commonly as wall-barley, bears the nearest resemblance of any to the cultivated plant.

From the story of Ruth in the Bible we learn that barley was cultivated in Syria so long back as 3132 years ago; perhaps that country is its native home. We have also very early accounts of this corn having been cultivated in Egypt; where it was affirmed that a knowledge of the art was imparted by Isis, who, having discovered the plant growing wild in the woods, instructed men how to use and improve its produce; Artemidorus also says it was the first food the gods imparted to mankind.

Pliny mentions barley as the most ancient food in old times, and it was not till after the Romans had learned to cultivate wheat and to make bread, that they gave barley to their cattle. Barley continued to be the food of the poor, and those soldiers who had committed any offence were fed with it instead of bread-corn. In the second Punic war, the cohorts who lost their standards were ordered an allowance of barley by Marcellus; and Augustus punished those who gave way to the enemy in the same manner.

The Romans obtained barley from Egypt and other parts of Africa, and from Spain. It was also grown in France, and one variety of it called Galaticum.

We have not the means of ascertaining whether barley was cultivated in England when the Romans first came here; Cæsar found grain, perhaps barley; or it may have been brought hither by the Phœnicians in exchange for tin; and in that case we had it as early as the Romans or Gauls. The Romans soon exported corn from Britain.

Pearl barley and Scotch barley are only barley freed from the husk by a mill; the distinction between the two being, that the pearl barley is reduced to the size of small shot, all but the very heart of the grain being ground away.

The great use of barley at the present day is in the preparation of malt liquor, and perhaps while we are upon this subject it will be right to give some account of this discovery or invention, which appears to have originated in the remotest times. Diodorus says that Osiris, the Egyptian Bacchus, or

the sun, was the inventor of malt-liquor, as a relief to those countries where the vine did not succeed, and Herodotus gives this reason for its being used in Eygpt; Pliny gives the Egyptian name of this liquid as *Zythum.* An intoxicating liquor is still made from this grain both in Egypt and Nubia, to which the name of *Bouzah* is given, which is of very general consumption among the lower rank of people. Burckhardt observed in Nubia that the green ears of barley were boiled in water, and served up to be eaten with milk. Maize or Indian corn is excellent thus prepared.

According to Xenophon, Cyrus recommended his soldiers to drink water wherein parched barley had been steeped, which they called *Maza,* probably to counteract the effects of impure water, as Pliny states that if water be nitrous, brackish, and bitter, it will, by putting fried barley meal into it, in less than two hours be purified and sweet, and may be drunk with safety.

In the retreat of the ten thousand, Xenophon describes the *ale wine* which he found in the Armenian villages as "very strong when unmixed with water; and exceedingly pleasant to those accustomed to it." This was also the liquor used in France, till Probus introduced vines there; and we learn from Tacitus that the Germans were, in his day, acquainted with the process of preparing beer from malted grain.

The general drinks of the Anglo-Saxons were ale and mead; wine was a luxury for the great. Ale is derived from the Saxon *eale;* and Phillips derives the word beer from from the Welch *bîr,* but we must go much further from home for the origin of the latter word, which in Hebrew signifies a well or spring. Ale was sold to the people, as at this day, in houses of entertainment; "a priest was forbidden by law to eat or drink at *ceapeale thetum,* literally places where ale was sold." After the Norman conquest wine became more commonly used; and the vine was extensively cultivated in England; but neither the juice of the grape nor of the apple have ever superseded the original beverage.

RYE.—*SECALE CEREALE.*

TRIANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* GRAMINEÆ.

This grain, the use of which for bread has been completely superseded by that of wheat, is said to be a native of the island of Candia; but if so, it must have been very

early carried to Egypt, as it was cultivated there in the time of Moses. Botanists distinguish four species of this plant: *Secale villosum ; Secale orientale ; Secale creticum ; Secale cereale ;* the last only is cultivated in Britain. There are two varieties of this species, the winter, and the spring rye.

With the exception of wheat, rye contains a greater proportion of gluten than any other of the cereal grains, to which fact is owing its capability of being converted into a spongy bread. It contains also much saccharine matter, rendering it easily made into malt; but having also a strong tendency to pass rapidly from the vinous to the acetous state of fermentation, it is not employed as malt. Unmalted rye meal is mixed in Holland with barley malt, and the whole being fermented together forms the wash whence is distilled all the grain spirit produced in that country, and known throughout Europe as Hollands Geneva.

Rye is the common bread-corn in all the sandy districts to the south of the Baltic sea and the gulf of Finland, furnishing the chief article of consumption, and a material of some consequence to the export trade of the Prussian ports. In Sweden the peasantry subsist very generally upon rye cakes, which they bake only twice in the course of the year, and which, during most part of the time, are consequently as hard as a board. Linnæus states that in Lapland one part of rye and two of barley were sown together; the barley shooting up choked the rye, which ran into leaf without a stem. After the barley was reaped, the rye advanced in growth, and without any farther care of the cultivator, yielded an abundant crop in the following year. At present, however, rye is not grown in Lapland. It is obtained only by the natives in barter for their dried fish.

The English name of this grain has no affinity with that of any other language, and thence the supposition has arisen that because, in years of scarcity, this kind of bread-corn was brought in great quantities from Germany and landed at Rye in Sussex, therefore the grain was named from that seaport.

Gerard mentions rye as growing very plentifully in Germany and Poland; and Turner in his Herbal notices the Dukedom of Cleves, where he says the wheat turns into rye in the second year.

This grain is but little noticed by the ancients. Pliny says it was cultivated by the Taurini who lived at the foot of the Alps, where it yielded, in general, at least a hundred-

fold; but it was of the worst kind, and the bread was unsavory and hurtful.

Nothing need be said here respecting the disease to which rye is subject, called *ergot;* we read of various cases on the continent where it had produced disease and death; but we may notice that modern investigation and science have rendered the poisonous qualities of ergot of rye subservient to good, and it now holds a place in the pharmacopœias of medical practitioners. Horned rye is of very rare occurrence in Britain.

BUCK-WHEAT.—*POLYGONUM FAGOPYRUM.*

Although this plant has no natural affinity with the cerealia, yet the present seems not an improper place to say a few words upon the plant and its uses.

Buck-wheat, frequently called *brank*, is an annual plant, with leaves of a remarkably elegant shape and delicate texture; the stalk is round and hollow; its general colour is green, but sometimes it has a reddish tinge, and is delicately transparent. The lateral branches shoot out from the joints of the stalk, bearing terminal heads of white flowers delicately tinted with pink at the edges of the petals; the plant altogether is elegant and ornamental even in a flower garden.

Buck-wheat is of very rapid growth, and is more generally cultivated in England for the purpose of fodder than for its seeds, which are however used sometimes as food for pheasants in winter, those birds being extremely fond of the grain. Pigs too are sometimes fattened upon buck-wheat, and it is given to horses mixed with oats, in both which cases the seeds must be crushed. This grain is used by distillers, it being capable of yielding a considerable quantity of good spirit. This use is made of it to a great extent at Dantzic, celebrated for its liqueurs, especially for the *Goldenwasser;* in the preparation of which the preference is given to the spirit produced from buck-wheat, this grain being even more fruitful in the saccharine principle than barley.

In many parts of Germany, where buck-wheat constitutes almost the sole food of the peasantry, and forms a considerable and highly relished portion of the diet of the more wealthy, it is likewise the basis of their beer, which is of fine flavour, generous and wholesome. The bread made from its flour is not so white as that from wheat, nor does

it contain so much starch, but it is nourishing and agreeable to the palate. Throughout Saxony, and in Brandenburg and Silesia, buck-wheat alone constitutes the three meals of the lower classes, and enters largely into the food of the superior ranks. In the nurseries of the wealthy, as well as at their tables, this grain makes its appearance as an indispensable part of diet, as much so indeed as potatoes with us; while among the peasantry, the dish of boiled buck-wheat is of the same importance as the kettle of potatoes to the Irish cottar.

For very young babes, as well as for growing children, buck-wheat is a nourishing, wholesome, and very digestible article of diet; and it makes excellent gruel.

In Brabant it is not unusual to see this grain sown near the dwellings of those who make a profit by keeping bees, it being considered unrivalled in yielding an ample and fit supply of materials for the delicious store of those industrious insects.

In an admirable paper urging the cultivation of buck-wheat, in the Magazine of Domestic Economy, it is suggested that probably the superiority of the Norfolk turkeys over those of the other counties, arises from their being fed with this grain, and full directions are given for its cultivation and various uses. We may extract the following account of the manner of dressing buck-wheat by the German peasants.

"The grain, in its unsophisticated state, after it has been thrashed and winnowed, is coarsely broken in a common hand-mill, which is generally a flat buhr-stone running on a pivot within another, with a hole to admit the grain, and having near the edge, an upright iron handle, which serves to turn it. The grain being broken is boiled with the husks on, in water containing a little salt, until the porridge is of a very substantial thickness. The mess is then served up with a lump of butter in it. Some, as a luxury, mix milk with it after it is boiled. The more wealthy have the grain prepared by the miller, so as to free it from the husks, much in the same manner as pearl barley in Scotland, but whether husked or not, a dish of buck-wheat, in its boiled form, makes its appearance at every Silesian gentleman's table, and is always welcome to each member of the family."

Buck-wheat will thrive in any soil, but it should be sown in

preference in poor sandy soils, as it greatly enriches them; it likewise cleanses the land, preparing it for wheat. It serves as manure when that article falls short, if as soon as it is in complete blossom it be rolled down, and immediately ploughed completely into the ground, and covered with a good quantity of earth, so that no trace of it be seen. The action of the sun upon the soil will make the buck-wheat ferment, and form a much richer manure than any produced from a dunghill exposed to the action of the rain.

Surely in the present state of poverty in our country it would be worth while to make trial of the efficiency of buck-wheat as an addition to wheat flour; the poor, even the rich, of other countries use it so, and therefore any production which can alleviate the evil of want in our own population ought to be cultivated and encouraged, and it would be a patriotic act in any family of consideration to set the example of its culture and use.

We now proceed to notice those edible vegetables cultivated in our island, which compose the genus *Brassica*, as being, next to the cerealia, the most important for human food. We shall commence with

THE TURNIP.—*BRASSICA RAPA.*

TETRADYNAMIA SILIQUOSA, *Linn.*—*Nat. Ord.* CRUCIFERÆ.

The native country and the origin of the English name of this vegetable are unknown. A species of turnip is occasionally to be found growing wild in Great Britain, but the root of this plant is of no value, and experiments have been vainly made by cultivation to assimilate this root to the vegetable in use at our tables.

The turnip was well known to the Romans; the best grew in the country of the Sabines, and were worth at Rome a sestertius, or two pence each. Both Pliny and Columella agree in considering them next to corn in utility and value, both as human food, and a provender for cattle.

It is very probable that the garden culture of the turnip was introduced by the Romans into this country, and perhaps, although neglected in the subsequent troublesome times, it was not altogether lost, or if appearing to be so for a time, had been preserved by the monks, who well under-

stood the value of any article of food which could vary their monotonous fare. There is no doubt that this root was in cultivation in the sixteenth century, but it has been disputed whether it was revived by native industry, or introduced at that period by the Flemings. Towards the latter end of that century it is mentioned by more than one writer. Gerard praises particularly those "grown by a small village near London, called Hackney," which he says are the best he ever tasted, but neither he nor Parkinson, who wrote in 1629, take any notice of the field culture of turnips; probably they were not thus cultivated until the close of the seventeenth century.

Turnips were eaten either baked or roasted in the ashes, in the time of Henry VIII., and the young shoots were used as a spring salad in those days, although they were sometimes boiled as at present.

The turnip in some of its varieties is of very universal culture throughout Europe. In Sweden it is a favourite vegetable, and we learn from Linnæus that even so far north as Lapmark a considerable quantity of turnip seed is sown annually, which frequently succeeds very well and produces a plentiful crop. The native Laplanders are so fond of this root that they are often induced to part with a whole cheese in exchange for one single turnip.

In Russia turnips are used as fruit, and eaten with avidity by all classes. In the houses of the nobles the raw turnip cut in slices is handed about on a silver salver, with brandy, as a provocative to the more substantial meal.

In Germany the root of the turnip is but of small size, and in France and the more southern countries it is still smaller. But as a proof that this is not owing solely to the heat of the climate, it is said that at Benares in Hindostan, latitude about 26°, turnips, radishes, asparagus, cauliflowers, and other garden vegetables are raised in considerable quantity by the natives, principally for European purchasers, so dear to the exile are the remembrances and associations of home, even in the least sentimental acts of life.

There are several varieties of the turnip in common cultivation, distinguished by colour, size, time of coming to maturity, productiveness, or flavour. Among these the Maltese golden turnip is a very fine variety, both in appearance and flavour. The Swedish turnip is another variety of a much larger growth, and of a more hardy nature than any of the

other kinds under cultivation; it is not so much used for human food as it deserves to be, but is largely employed for fattening of cattle.

The French turnip, *naveu*, has more the appearance in shape and size of a carrot. It is of very fine flavour, and when used is not peeled but merely scraped, the peculiar taste chiefly residing in the outer coat. This variety is now rarely cultivated in this country.

In Barbary a small parsnip-like turnip with fibrous roots, called in that country *el bashoure*, is held in much esteem for its agreeable pungency.

It is recorded in the Philosophical Transactions that in the years 1629 and 1630, there being a scarcity in England, good, white, and wholesome bread was made of boiled turnips, deprived of their moisture by pressure, and then kneaded with an equal quantity of wheaten flour, thus forming what was called turnip-bread. The scarcity of corn in 1693 obliged the poor people of Essex again to have recourse to this species of food.

Turnips contain much oil, and a little essential salt; but they do not contain so much nourishment as either carrots or parsnips.

Respecting the ravages of the turnip-fly, its natural history, or the methods which have almost vainly been devised to prevent its depredations, nothing need be said here; they are continually discussed in agricultural publications, and are little interesting to the general reader.

CABBAGE.—*BRASSICA.*

Under this general name are found many cruciferous esculents of great utility; the roots, the leaves, the stems, the buds, are eaten raw, or dressed in various ways; and the seeds of many species are valuable on account of the oil which they afford. None of the family are directly poisonous. The Cruciferæ being found as weeds in almost every field, constant changes are produced, and the Brassica are peculiarly liable to run into varieties and monstrosities.

The variety of Brassica which was first cultivated in England cannot be ascertained, but it is probable that one species was introduced by the Romans, since *Kale* is mentioned among the oldest English records. The Saxon name for February is Sprout-kale, and that is the season when the

sprouts from the old stalks begin to be fit for use; the Saxons must, therefore, of course, have been familiar with the culture of cabbage or kale, as it is not at all probable that they invented the name after their settlement in this country. As the ancient Germans likewise cultivated the plant from remote times, they as well as ourselves might be indebted to their Roman conquerors for this vegetable.

The word cabbage, by which all the varieties of this plant are now improperly called, means the firm head or ball that is formed by the leaves turning close over each other; the firm headed variety which we now peculiarly call cabbage was for many years imported into England from Holland. Sir Anthony Ashley first introduced its cultivation into this country, and in memory of this, there is said to be a cabbage at his feet sculptured on his monument at Wimbourne in Dorsetshire. The plant does not appear to have become generally cultivated, for the vegetable continued to be imported; and Ben Jonson, who wrote more than half a century afterwards, says, "He hath news from the Low Countries, in cabbages."

It is recorded that cabbages were first introduced into the north of Scotland by the soldiers of Cromwell; it is perhaps more probable that the colonies of German fishermen from Cuxhaven and the adjacent places, which peopled the coasts of the central parts of the east of Scotland, brought thither some species of the plant at a period much anterior to the Commonwealth. In that country the cabbage and the open colewort give the name of kale to a kind of soup of which they form the principal ingredients; and in the songs of Burns we find continual allusions to the "kale brose of auld Scotland," which, though with many of the ancient peculiarities of the people, it has fallen into much disuse, is still considered a national dish.

All those kinds of cultivated Brassica the leaves and flowers of which are eaten, belong to the species Oleracea. This resolves itself into many varieties and endless sub-varieties, which however, may be reduced to the three classes —Cabbages—Kale or Colewort—and Cauliflower.

The first class comprises, as we have said, all those kinds in which the leaves gather into what is called a head, and are blanched by their own compression. The kinds are numerous.

The second class, Kale, or Colewort.—In these the leaves

are expanded and coloured. Borecole, or Curly leaved colewort, *Brassica oleracea* var. *δ sabellica*, is commonly cultivated in its varieties of green or Scotch kale, and purple or brown borecole.

This vegetable was highly regarded by the ancients; Pliny praises the spring sprouts of cole, which, he says, although pleasant and sweet to other men, "yet Apicius, that notable glutton, loathed them." Both the Greeks and Romans ate the leaves raw, to prevent the effects of excessive indulgence in wine, they being supposed to possess the power of relieving intoxication. There are various kinds of coles mentioned by Pliny, distinguished by the names of the places where they grew; among these, the coles of Bruzzi or Calabria were hardy, having large leaves, small stalks, and an acrid flavour.

The Sabellian coles, with curled and ruffed leaves, are mentioned as having a small stem supporting heads of an extraordinary size; these were reputed the sweetest. The same author mentions a kind of cabbage-cole from the vale of Aricia "with an exceedingly great head and an infinite number of leaves, which gather round and close together." The Romans planted the sprouts as well as the young plants.

The ancients were firmly persuaded that there was a sympathy in plants as well as animals. Pliny says the coleworts and the vine have so mortal a hatred to each other, "that if a vine stand near a colewort, it will be sensibly perceived that the vine shrinks away from it; and yet this wort, which causes the vine thus to retire and die, if it chance to grow near *origanum*, marjoram, or *cyclamen*, sowbread, will soon wither and die in its turn."

Ancient authors have mentioned various medicinal uses to which this plant was applied; among them, that the seed or juice taken in drink, is a good remedy for those who have eaten poisonous mushrooms.

Gerard is the oldest English author who has said much upon this useful vegetable; he notices several kinds; among them he says, "Swollen colewort of all others is the strangest, and which I received from a worshipful merchant of London, Master Nicholas Lete, who brought the seed out of France; who is greatly in love with rare and fair flowers and plants; having a servant there at Aleppo, and in many other countries; for the which myself and likewise the whole land are much bound unto." What would Gerard say could he see our present foreign plants and flowers?—our splendid fruits

and vegetables from distant lands naturalized by immense care and trouble, and yielding ample recompense; our flowering shrubs from the banks of the Missouri, and our herbaceous plants from the plains of the Rocky Mountains, growing and flowering luxuriantly even in our cottagers' gardens?

Gerard also notices the Rape-cole, of which he says he received the seeds from Italy, and recommending that they be "carefully set and sown as musk melons and cucumbers."

This variety has now become one of our hardiest field plants.

A variety of brassica under the name of cow-cabbage,—*Brassica oleracea* var. *arborescens*,—has been recently introduced into this country from La Vendée with perfect success, and there is every reason to hope the cow-cabbage will at length become naturalized in England. It is said that sixty plants afford provender sufficient for one cow during three or four years, without fresh planting. This cabbage is now successfully cultivated in Jersey.

The third division consists of cauliflowers and brocoli, and of these *Brassica oleracea*, var. ϵ *botrytis*, is the most delicate variety of the brassica genus. It was first brought into England from Cyprus, by way of Marseilles; in the above mentioned island it is said to attain high perfection, although it is not supposed to be indigenous there. At what precise period it was introduced to our horticulture is not known; in the beginning of the seventeenth century it was a rarity here, found only at the tables of the opulent. In the year 1619 two cauliflowers cost three shillings; towards the end of the same century this vegetable was brought to some degree of perfection, and appeared in our markets about that period. The importation of Dutch gardeners and style of gardening then gave an impulse to English horticulture, and the reign of William III. produced not only the blessings of civil liberty to his adopted subjects, but taught them how to improve and appreciate the arts brought hither by his followers. In this the English succeeded so well, that up to the period of the French revolution, cauliflowers were regularly exported from England into Holland, some parts of Germany, and even France; even now cauliflower seed obtained from England is the most esteemed throughout the continent.

Brocoli is usually considered merely as a sub-variety of the cauliflower, and this supposition appears probable, as

the plant has a great tendency to run into new varieties. It is commonly observed, that the more any plant has been changed by cultivation, the more readily does it admit of other changes.

Both the red and the purple brocoli came to us from Italy; gardeners have now produced from these thirteen varieties, which succeed each other without any interval, except perhaps for a month or two in the middle of summer, when its place is supplied by such a variety of other vegetables.

SPINACH.—*SPINACEA OLERACEA.*

DIŒCIA PENTANDRIA, *Linn.*—*Nat. Ord.* CHENOPODEÆ.

This vegetable seems to have been unknown to the ancients; the earliest notice we find of it is in the works of the Arabian physicians, who of course treat only of its supposed medicinal properties, which might probably have originally led to its adoption as an edible vegetable. Spain is supposed to be the first European country into which spinach was introduced, and indeed it has been said to be indigenous there, but if it be a native of Arabia or western Asia, Spain would naturally be its earliest European home. According to Beckmann, the first notice of its being used as an edible substance in Europe occurs in 1351, in a list of the different vegetables used by the monks on fast days. Rather more than two centuries later it seems to have been in cultivation in England, as Turner, in his Herbal, which was published in 1568, mentions it as "a herb lately found, and not long in use." It was then prepared for table in the same manner that it is at present.

Two varieties of spinach are cultivated, the one having the leaves arrow-shaped and rough, and the other having them round and smooth. The latter grows the more rapidly, is the larger and the more succulent, the former is the more hardy, and therefore is preferred for winter supply.

The young leaves of spinach were used in salad in the time of Elizabeth, down to the reign of Charles I. Gerard says, "This herb, of all pot-herbs and salad herbs, maketh the greatest diversities of meats and salads." This author wrongly considered it a kind of orach, *Atriplex hortensis*, which is a native of Tartary, and was cultivated in England earlier than spinach, as we have accounts of it in 1548.

The orach is now seldom seen here, but in France it is highly esteemed.

WILD SPINACH, or English Mercury, or Good King Harry, —*Chenopodium bonus Henricus.*—Pentandria Digynia, *Linn.*—*Nat. Ord.* Chenopodeæ.

This plant, which has obtained so many names, may be found on waysides and among ruins in many parts of England, and in Lincolnshire, where it is cultivated, it is preferred to the common spinach, the young stem being also eaten like asparagus.

New Zealand spinach—*Tetragonia expansa*—is so called from having been found at that island by Captain Cook. The naturalists who accompanied the expedition thought, from its resemblance to the chenopodium, that it might be safely eaten, although the natives made no use of it, and on trial it was found agreeable and wholesome. Sir Joseph Banks brought it into culture in England in 1772, and it has subsequently been found to be a much more valuable and hardy plant than was at first supposed. From being treated as a greenhouse plant, it has by degrees become almost naturalized in the south-west of England. It has this great advantage over the common spinach, that it produces abundance of large succulent leaves during the hot weather, when the common plant runs almost immediately to seed, producing little or nothing. It is likewise milder in flavour, and of extremely rapid growth.

The plant has been found on the Tonga islands, and Thunberg found it indigenous in Japan. It is remarkable as being almost the only native of the isles of Australasia which has been found worthy of a place in the kitchen gardens of Europe.

THE HOP.—*HUMULUS LUPULUS.*

DIŒCIA PENTANDRIA, *Linn.*—*Nat. Ord.* URTICEÆ.

This extremely elegant plant, which might and ought to be as useful as it is elegant, is the next in the series of English vegetables of which we shall treat. It is true that we do not eat the hop either cooked or in a raw state, but as connected with barley in composing our national and most refreshing beverage, ale, it fully deserves a place here.

The generic name of the plant is said to be derived from

its flourishing best in a moist soil, but the word is of modern origin. It seems to have been unknown to the ancient Greeks, as it is unnoticed by their authors; some writers have suggested that the *Smilax aspera* of Dioscorides was our modern hop, but although the description of the plant agrees in many points, that of the fruit does not do so, and we must conclude that the smilax of the Greek writer is the same of that of Linnæus. Pliny is the first of the Romans who makes mention of this plant; he calls it *Lupulus Salictarius*, perhaps from its habit of climbing upon sallows and other trees. This author informs us that the ancients made no use of the flowers, excepting to ornament their gardens, but that the Romans in his time ate the young tops as a vegetable, more palatable than nutritious.

But one species of the hop has been discovered; this grows wild in most parts of Europe, climbing to the height of twenty or thirty feet. It is principally in the north of our quarter of the globe that the plant is indigenous, hence Lobel has called it *Vitis Septentrionalium*, the Vine of the northern regions, from the use which is made of it. It is however conjectured by Linnæus that hops were brought to Europe by the Goths in their migrations from Scythia, and particularly from the Ukraine, because old writers make no mention of the plant, and it grows wild in those districts at the present day. This is possible, although it is now indigenous in England, Germany, Switzerland and Sweden.

The earliest modern notice which we can with certainty refer to hops, is in a letter of donation from Pepin, the founder of the Carlovingian dynasty in France, in which he speaks of *humolarim*, doubtless hop-gardens, and Adelard, bishop of Corbey, in the same country, in A.D. 822, freed the millers belonging to his district from all labour relating to hops. Hop-gardens are mentioned in the time of Louis the German, in some ancient documents; and their produce named among the articles to be delivered to churches and monasteries in the two succeeding centuries. There is proof that hops were cultivated in Germany in the fourteenth century, and about this time the use of them seems to have been introduced into the breweries in the Netherlands. Thence the use of hops was first made known in England by some people from Artois, in the reign of Henry VIII. or about 1524; but the king, in an order respecting the servants of his household in the twenty-second year of his reign, that is in 1530, forbade brewers to put hops into the ale. There

was much communication between the gardeners of Holland and those of England during this reign; we owe to the former many of our best vegetables, and our manner of cultivating those which are indigenous here; among them is probably the hop, as our name is derived from the High Dutch, *Hopffen;* and in the other dialect of the country the name is almost similar, *Hoppe*, and *Hopcruyt.*

The first mention of hops in our *laws* is in the fifth year of Edward VI., 1552, at which period some privileges were granted to hop-grounds; in 1574 we find an English treatise written expressly on the culture of hops, by Reynolde Scot, entitled, "A perfite Platforme of a Hoppe Garden." He complains that "the Flemmings envie our practice herin, who altogither tende their owne profite, seeking to impownde us in the ignorance of our commodities,— to cramme us with the wares and fruites of their countrie, and to doe anye thing that myght put impediment to this purpose, dazeling us with the discommendation of our soyle, obscuring and falsifying the order of this mysterie, sending us into Flaunders as farre as Poppering, for that which we may finde at home in our own bank-sides." Thus is the spirit of selfishness in commerce unchanged through all ages!

Tusser, who resided in Essex during the reign of Henry VIII. and the three following monarchs, has given us an account at some length of the manner of treating the hop in his day; from this we will extract a verse or two which may be of service to those who wish to raise the hop as an ornamental plant over a trellis or verandah. We modernise the excellent old author's spelling.

"Ground gravelly, sandy, and mixed with clay,
Is naughty for hops, any manner of way;
Or if it be mingled with rubbish and stone,
For dryness and barrenness, let it alone.

"Choose soil for the hop, of the rottenest mould,
Well dunged and wrought, as a garden plot should;
Not far from the water, (but not overflown,)—
This lesson well noted, is meet to be known."

In his directions for the month of March he says,

"In March at the furthest, dry season or wet,
Hop roots so well chosen, let skilful go set;
The 'goeler' and younger the better I love,
Well gutted and pared the better they prove.

" Some layeth them crosswise, along in the ground,
As high as the knee they do cover up round;
Some prick up a stick in the midst of the same,
That round little hillock the better to frame.

" By willows that groeth thy hop yard without,
And also by hedges thy meadows about,
Good hop hath a pleasure to climb and to spread,
If sun may have passage to comfort her head."

We hope that these plain and ample directions for planting the hop may encourage some of our readers to make trial of it for covering unsightly fences or for a trellis work. The only objection to the plant in the latter situation is the roughness of its stalks which cling to the dress and are not pleasant to the touch. But the elegance of the plant, the beauty of its verdure, and the classical form of its cones, reminding one of the delicate tracery upon the baths of Trajan and Nero, amply compensate for the one unpleasant quality which it possesses. We are scarcely disinterested partisans of the hop, as the mention of it for an ornament to the flower garden brings back to us a shady seat, the favourite resting-place of our youth, under some fine plane trees, and backed by a screen thickly covered with hops, whose branches laden with cones entwined themselves among the large velvet leaves of their supporters, and thence hung down " thick clustering from the bough," their rough stalks catching many a youthful curl, and deranging many a childish drapery. We loved that closely shaded retreat; and in after years, when picturing to ourselves the *one* scene between Francesca da Rimini and her lover, so touchingly described by Dante, we have always placed its occurrence in that trellised hop-bower.

Gerard, who wrote on this plant in 1596, praises it not only for the use made of its cones in brewing, but recommends the water in which they have been boiled to be mixed with meal instead of yeast for the same purpose as the latter article is used. He also mentions a salad made of the young shoots.

By an Act of Parliament of 1603, the first year of James I., it is probable that hops were then produced in considerable quantity in England, as it was found necessary to forbid, under severe penalties, the introduction or use of

damaged or adulterated hops. Besides this act, another was passed prohibiting their being put into beer, in consequence of their supposed deleterious qualities; ale, it seems, was made entirely without them. This act was little attended to, and in the reign of Anne another order was made to quite a contrary effect, that a penalty should be inflicted upon any brewer who should use any other bitter than that of hops in his beer.

Hops were occasionally imported as late as the year 1695, but we learn from Coles, and also from Lord Bacon, that Essex and Kent were in their time noted for hop-grounds.

In Sweden the Sweet gale, *Myrica gale*, was formerly used in beer so generally that Christopher III. in 1440 confirmed an old law, said to have been made by Magnus Smeck, that those who collected this plant before a certain period, on any common, or on another person's land, should pay a fine. This plant diffuses an agreeable smell:

"*Gale* from the bog shall waft Arabian balm."

The same punishment was appointed for the too early picking of hops; and the cultivation of them was so strongly enforced, that every farmer who had not forty poles with hops growing round them, was punished, unless he could shew that his land was unfit for producing them. Gustavus I. also was desirous of encouraging the cultivation of the hop plant, but his exertions were attended with so little effect, that even in the reign of Christina, that is, in the middle of the seventeenth century, all the hops used in the kingdom were imported from Germany, particularly from Brunswick. The queen had some hop plantations as rarities in her garden, and the plant became soon so generally cultivated, that the German hop farmers, who before had been accustomed to travel to Sweden every third year to receive payment and take new orders, were much dissatisfied, and suffered a part of their hop-grounds to run to waste. Under Charles XI., who reigned from 1660 to 1697, the cultivation of hops was first brought to any degree of perfection. The Swedes make a strong cloth from the fibres of the hop vine, after it has been dressed like flax, and the London Society of Arts and Manufactures offered premiums in 1760, for cloth made from hop-stalks, specimens of which were produced in the year following, and likewise again in 1791.

Ground ivy, *Glechoma hederacea*,—called alehoof or tunhoof,—was generally used for preserving beer before the use of hops was known; horehound and wormwood have been used as a substitute, when hops have been dear.

Medicinally hops have been recommended and used in various ways; we have our selves had recourse to them in the chamber of sickness to win for our patient "tir'd nature's sweet restorer, balmy sleep," and not without effect; we have also known the experiment effectual in cases not immediately under our own eye.

The hop is the only native plant that is under the control of the Excise, a disgraceful pre-eminence in importance, and one which it does seem a cruelty to continue. We have seen the hop flinging itself lavishly over the thatched cottage of the labourer; the first glance brought to us a sensation of pleasure, but before we could realize the vision of plenty and comfort which it presented, a dark form stepped into the picture, robbing the cottager of the fruit grown under the free air of heaven, and upon the walls of his own dwelling. The prevalence of spirit drinking must give pain to all who can feel for the poor and hard-working, and many schemes are set abroad to lessen or prevent it; but the poor must have some beverage beyond water or tea, and surely beer, the breakfast cup of former dainty dames, the invigorating draught of our ancestors, is the fittest drink for those who now toil at the loom or in the field. But the cottager must be content to see his hops cover in their graceful luxuriance his thatched roof; those drooping bunches which yield to the merchant the gains which enable him to live in luxury, may not be touched by the labourer even though their produce should prevent his family from starving. He may make his unripe grapes into a sour unwholesome wine, but he may not touch the healthful plant which shades his cottage window, and obtrudes its verdant flowers, as it were in mockery, into his casement. Recourse is had to the spirit shop, and in stealthily quaffing a drugged and deleterious imitation of "that stream in the starlight which kings do not ken," he endeavours to forget that "nature's grace" is not "free" to him, and that there is one growth of his native soil which it is forbidden him to touch.

Under these remembrances it is almost a mockery of our fellow creatures to conclude in the words of Tusser:

" The hop for his profit I thus do exalt,
It strengtheneth drink, and favoureth malt;
And being well brewed long keep it will last,
And drawing abide, *if ye draw not too fast.*"

May our children see the day again when the warning of the last words may be necessary and applicable to our labourers.

ASPARAGINOUS PLANTS.

Under the general name of Asparagus the ancients were accustomed to class all young sprouts of vegetables which were used in that state; the word is almost literally Greek, signifying a young shoot before it unfolds its leaves, as handed down to us by Dioscorides. Herein are classed all those pulpy shoots, stems, buds, and bottoms of compound flowers, which are prepared for the food of man by a culinary process. They are of expensive cultivation, because only a small part of the plant is used, and that in the young state. Of these we shall now treat.

ASPARAGUS.

HEXANDRIA MONOGYNIA, *Linn.*—*Nat. Ord.* ASPHODELÆ.

This delicious vegetable is evidently a native of this country, for Gerard says, " Our garden asparagus groweth wild in Essex, in a meadowe adjoining to a myll beyond a village called Thorp, and also at Singleton, not far from Corbie, and in the meadowes neere Moulton in Lincolnshire; likewise it groweth in plenty neere unto Harwich, at a place called Landammerlading." We quote this paragraph verbatim for the sake of any of our readers who may be collecting English plants for a Herbarium, although we much fear our author's description of the residence of the wild asparagus may not be at present applicable.

Miller seconds Gerard in supposing that our garden asparagus is merely the wild sort brought by culture to its present perfection, from its original slender size, no larger, according to Gerard, than a swan's quill.

This vegetable first came into use as a food about two hundred years before Christ, in the time of the elder Cato, who wrote upon its culture. Pliny says that asparagus, which formerly grew wild, was in his time carefully cherished in

gardens, particularly at Ravenna, where the cultivated vegetable reached a very large size. The wild asparagus was called *Corruda* and *Lybicum*, and by the Athenians *Horminium*. Asparagus still grows upon the banks of the Euphrates to an extraordinary size; and we learn from an Eastern tradition that it formerly reached to such a height in Caria as to be capable of hiding a person from pursuit. Of course this was in its flowering state; but even so, it must be much more sturdy than with us, as its miniature trees, although extremely elegant and beautiful, are quite insufficient to give possibility to such a legend as the one above adverted to.

We cannot trace the cultivation of this vegetable in England; in Queen Elizabeth's time it was eaten, according to Gerard, "sodden in flesh broth, or boiled in faire water, and seasoned with oile, vinegar, salt, and pepper, then served at men's tables for a sallade."

The isle of Ely is at present one of the places noted for the growth of asparagus in England; and coupling this modern fact with the ancient one of Ravenna being noted for it in the time of Pliny, and the banks of the Euphrates at the present day, we may imagine the kind of soil and situation which this plant particularly likes. The land about Ravenna is formed of the debris left by the "wandering Po" in its mazy course to the sea; the delta of the Euphrates is formed in the same manner; and the isle of Ely presents the appearance of having been reclaimed from a marshy waste. Ely stands upon the point of a promontory, which terminates a ridge of hills sloping down to the rich meadows of Cambridgeshire, so famous for the cheese produced there, on the one side; and on the other forming a boundary to the dreary fens of Norfolk. The soil is rich, and the neighbourhood is famed for the excellence of the vegetables produced there, especially strawberries and asparagus. Ely is an interesting place to the antiquarian as well as to the gourmand; its splendid cathedral towers above all surrounding objects, seeming to look down in scorn upon the humble spires whose "silent fingers" as surely "point to heaven" in the scattered and oasis-like villages of the Norfolk fens, as does the proud lantern dome of the queenly cathedral. The monastery belonging to it probably covered the slope now appropriated to orchards and gardens; among these may be traced

many fragments of walls and arches which have perhaps in former days echoed to the chaunted miserere, or witnessed the more sincere sigh of the heart-broken penitent. The gay footstep of childhood now sports among the crumbling ruins, and the spade of the gardener occasionally upturns relics of the days of old, which make even childhood and labour pause to think.

SEA KALE.—*CRAMBE MARITIMA.*

TETRADYNAMIA SILICULOSA, *Linn.*—*Nat. Ord.* CRUCIFERÆ.

This excellent and most valuable vegetable, which the march of modern horticulture has brought into very general cultivation, was called by old writers, sea colewort. It is indigenous on the southern and western shores of our island, and likewise on the sandy downs near the sea in Sweden, Denmark, and parts of Scotland. Gerard found it growing between Whitstable and the isle of Thanet; and also on the beach near Colchester, where there is no earth to be seen, but only sand and pebbles. It is also found growing in the crevices of cliffs, and this is observed to be the most delicate; but it is only procured with the greatest danger, by boys who let themselves down by means of a rope, which is lowered by others standing on the top. From time immemorial, the country people in the west of England have been in the habit of searching for and gathering the tender shoots, which shew themselves in the spring through the sand and gravel, and which, thus naturally blanched, are, when boiled, a delicate vegetable. From a statement in the Transactions of the Horticultural Society, we learn that sea kale was sent from England to the continent, by Lobel and Turner, before the middle of the sixteenth century; the earliest botanical notice of it, however, is by Miller, in 1731; and it was not brought into repute as a garden vegetable until the year 1767, when Dr. Lettsom introduced its cultivation.

It appears from Pliny that the Romans had not attempted to raise this vegetable in their gardens in his time; he calls it *Halmyridia*, and says it grows on the sea coast only. He farther observes that it is used in long voyages at sea, being put when fresh into barrels where oil has been lately kept, and then stopped up close to prevent the action of the atmosphere.

Sea kale is a hardy perennial, and when allowed to attain its full growth is a very beautiful plant, being of a sea-green colour tinged with purple. It bears delicate white flowers, which have a rich smell of honey; and these are followed by roundish pods divided into two cells, only one of which generally contains a seed, but the great profusion of flowers secures an abundance of seeds. The plant may also be propagated by parting the root, which contains eyes or buds resembling those of the potato.

ARTICHOKE.—*CYNARA SCOLIMUS.*

SYNGENESIA ÆQUALIS, *Linn.*—*Nat. Ord.* COMPOSITÆ.

This singular, but handsome vegetable is nearly allied to the carduus or thistle. Beckmann has ingeniously brought together all the remarks which can be found in ancient authors, in order to determine whether the artichoke be one of the plants mentioned by them, and if it be, by what name they called it. He gives descriptions of the carduus, the cinara, the scolymus, and the cactus; at last coming to the conclusion that our artichoke and cardoon were unknown to them. Each of the plants above mentioned was in some part or another eaten by the Greeks and Romans, but it does not seem that the description given of any one of them agrees precisely with the artichoke, although of the same genus, and each agreeing in one or more particulars. The cinara seems to approach the nearest to our artichoke, and this Beckmann thinks is identical with the carduus, which according to Pliny was eaten pickled with vinegar; no mention, however, being made of its preparation previous to pickling, nor even of what part exactly use was made. The scolymus was eaten both raw and cooked, but we know not precisely what part, as Dioscorides mentions the young leaves, other authors the root and flower. It is very difficult to ascertain plants named by the ancients, as they had not the art of separating the different genera correctly, and of assigning to each certain characterising marks. Many old plants have been banished from our gardens by the introduction of new ones, and among those which still are cultivated and used in their native country, uncertainty must prevail on account of our ignorance of the modern names.

Some of the plants above mentioned were preserved in

vinegar, and in honey, seasoned with the root of laserwort, and cummin; by which means they were to be had throughout the year. The juice of the stalk was used by the ancients to restore the growth of the hair to the head, even where the latter was quite bald. Some of these plants seem to have been procured from Carthage and from Sicily.

In modern times, the artichoke was first known in Italy in the fifteenth century; it was brought from the Levant, and considered as a new species of food. It was in the garden at Venice in 1473, at which time it was very scarce; but it seems that in 1466 one of the Strozzi family brought the first artichokes from Florence to Naples. The plant was introduced into France in the beginning of the sixteenth century; and during the reign of Henry VIII., about 1548, it was brought into our gardens, where, from the attention paid to its culture, and the great moisture of our climate, it soon became so much improved in size and flavour that the Italians sent for plants from England, deeming them to be of a superior kind; but they soon degenerated to their natural size when restored to that country. The artichoke is held in much higher estimation on the continent than it is with us, although it is beginning now to be more cultivated by the small gardeners than it used to be. But it requires much room, great attention as to manuring and watering, and its peculiar flavour prevents its being in common request; these causes must prevent its being grown in large quantities; while the high price it bears at market prevents its being brought into more general use. The English dress their vegetables so very plainly that neither the peculiar flavour nor inconvenient appearance of the artichoke are disguised as on the continent, where it is eaten raw with vinegar, oil, salt, and pepper; but the heads are considered more wholesome boiled, and are thus sold in the streets of Paris. The Germans and French eat also the young stalks boiled, and seasoned with butter and vinegar. These, blanched like celery, and preserved in honey, are said to be an excellent pectoral preserve.

Respecting the origin of the word artichoke various conjectures have been formed. It has been by some authors derived from the Greek word *coccalon*, which signifies a fir-cone, with the Arabic *al* prefixed; this again has been denied, and the word drawn from the Arabic name, *harxaf* or *harchiaf*. Were the original country of the artichoke

really known, the etymology of the name might perhaps be found. Linnæus says that it grew wild in Narbonne, Italy, Sicily, and Provence; but late authors have sought for it in vain in those places.

The artichoke is known in Persia; said by Tavernier to have been carried thither, like other European vegetables of the kitchen garden, by the Carmelite and other monks; only in later times has it become common.

The Cardoon—*Cynara cardunculus*,—is a native of Candia, whence it was introduced into England about a century after the artichoke. On the continent it is extensively used, but it has never been much cultivated in Britain. The stems of the young leaves are the only edible parts of the plant; these are stewed in soups, or used in salads. When the plant attains the height of about six feet, it is bound round in such a manner that the leaves are compressed to the stem; it is then surrounded with earth and dung, and under this covering it in a few weeks becomes so white and tender, that the above mentioned parts may be dressed and eaten.

SUCCULENT ROOTS.

This division comprehends some of our most nutritious and valuable vegetables, cultivated for the food both of man and of animals. According to experiments which have been made respecting the increase and decrease of the fecula which the root contains, it has been found that the period of its greatest weight is just previous to the flowering of the plant; that after that time the nutritive qualities of the root decrease. This has been particularly exemplified in the bulb of the colchicum autumnale. In noticing this important class of vegetables the Potato first demands our attention.

POTATO.—*SOLANUM TUBEROSUM.*

PENTANDRIA MONOGYNIA, *Linn.*—*Nat. Ord.* LURIDÆ.

It is always an interesting employment to trace the progress of art or cultivation among men; to see by what gradual, often almost imperceptible, steps the most valuable and useful of our domestic comforts have been brought to their present state of perfection; how many checks from the ignorance or prejudices of men they have met with in their

progress; and finally, how triumphantly they have overcome every obstacle, and at length have obtained for their promoters the gratitude of mankind. These observations apply, although in a less degree, to the articles of food by which human and animal life is sustained; the habits of man are no more stationary in this respect than in his domestic arrangements; what was once a luxury confined to the tables of the rich is now a necessary with the poor; we can no more send even our paupers back to the uncultivated roots of our forefathers, than we can reduce their minds to the darkness of the middle ages. It is not merely that the law of change is the law of the universe; change is but the instrument of good; man is essentially progressive; and if for a moment he appear to retrograde, it is merely because our imperfect vision cannot clearly follow him in his onward course—thus do we gaze upon the bright planet, "day's harbinger," and fancy that she too retraces her noiseless steps, till science teaches us that in her "there is no change, neither the shadow of a turning." Let us have confidence not only in that plan of progressive improvement which is so distinctly marked upon the face of nature, but in the very constitution of man himself; and if for a short period he appear to retrograde in his course to perfection, let us attribute the apprehension merely to our own shortsightedness. No machine is perfected at once; nor is it till the spring breaks, or the flaw becomes irremediable, that the engineer discovers the inadequacy of his means to the end required; he not only repairs the flaw and replaces the spring, but taking a lesson from his present failure, he improves upon his former work, and advances a step further towards the perfection of usefulness. Had not the spring given way, no improvement would have been made; necessity was in this case the parent of invention.

The history of the discovery and culture of the potato affords us an interesting example of progress under difficulties. This root, now among the necessaries of life, was, for some time after its introduction to our country, slighted, and almost discouraged, by the scientific and practical gardeners of those days. Its progress was extremely slow during the first few years, but equally rapid afterwards.

The spirit of maritime discovery which was fostered by Prince Henry of Portugal, and carried into effect by Columbus, had infected other parts of Europe, not with the laud-

able desire of scientific improvement, but with the thirst for foreign dominion; and in 1584 our Queen Elizabeth sent out a fleet "to discover and plant new countries not possessed by Christians." Thomas Heriot, the mathematician, was one of these adventurers; he returned with the rest two years after his departure, and it has been suppossed that to him we are indebted for the first knowledge of the potato, as he describes an American plant called *openawk* thus:—"The roots of this plant are round, some as large as a walnut, others much larger; they grow in damp soils, many hanging together as if fixed on ropes. They are good food either boiled or roasted." Sir Walter Raleigh, whose tragical and undeserved fate is one of the numerous stains upon the *conduct*, not the reign, of James I., introduced the potato into Ireland on his return from the expedition to North America, in which he colonised Virginia; the story is that he reared the plant on his estate near Youghall, county Cork, where it grew and bore flowers; that his gardener having gathered the "apples" as the fine fruit which his master had brought from abroad, carried them to Sir Walter, who ordered the plants to be rooted out. The man accordingly dug them up, but finding a large quantity of tubers, the plants were saved from destruction. Many and various observations have been made upon this story, in order to ascertain whether Sir Walter knew which part of his foreign treasure was edible; but it is not worth our while to enter at length upon the matter.

Other accounts state that the potato was not introduced into Ireland until the year 1610, while some writers affirm that the people of that country were in possession of it at a much earlier period. This however may refer to the Spanish *Battata*, or sweet potato, which was carried to Ireland by Captain Hawkins in that year. The sweet potato is mentioned by Gerard in his Herbal, published 1597, as the *Sisarum Peruvianum;* he describes it as growing in India, Barbary, and Spain, recommending it for conserves and sweetmeats; for this purpose the root was used in the time of Shakspeare. Gerard also mentions the common potato as *Battata Virginiana*, giving an accurate description of both plant and flower.

The potato was brought into southern Europe by a different channel; Clusius received it during his residence at Vienna in 1598, from the governor of Mons in Flanders,

who had procured it the year preceding from Italy, under the name of *Taratouffli.*

For some time after its introduction into this country, the potato was planted in the gardens of the nobility as a curious exotic; in the reign of James I. it was considered as a delicacy, being provided in small quantity for the queen's household, at the price of two shillings per pound. Through the succeeding reign and the Commonwealth it remained extremely scarce, nor did its cultivation spread till more than a hundred years after the discovery of Virginia. Mr. Buckland, a Somersetshire gentleman, drew the attention of the Royal Society to its value in case of famine, by a letter in 1663; such members as had lands adapted to its culture were entreated to plant the new vegetable, and Evelyn was requested to mention it in his Sylva; but so little was this admirable practical gardener aware of its importance, that he took no notice of it till thirty years afterwards; and then in his "Kalendarium Plantarum," (the first gardener's calendar published in Britain,) in the following cursory manner. "Plant your potato in your worst ground. Take them up in November for winter spending; there will enough remain for a stock, though ever so exactly gathered." This root, thus slightingly noticed by a writer as celebrated for his careful research as the man was for his unwearied benevolence, forms at the present day the chief food of the peasantry of Ireland. The progress of the vegetable was but slow in England, notwithstanding the zeal of the Royal Society; but in Ireland, at the end of the seventeenth century, potatoes were much used as bread, and a writer on gardening at that time says, they "may be propagated with advantage to poor people."

Ray scarcely mentions the potato; and in the Complete Gardener, published by London and Wise in the succeeding century, it is not noticed at all; of so little importance was it thought, that Bradley says it is "of less note than horse radish."

The potato was not made the object of useful culture in Scotland till 1728, when a labouring man named Thomas Prentice, near Kilsyth, in Stirlingshire, cropped the little plot of ground from which he partly drew his subsistence, with potatoes. The neighbouring cottagers, and afterwards the farmers, seeing the value of the crop,

followed his example. Prentice himself gathered together sufficient money to retire upon an annuity, "having been for sixty-four years a witness to the happy effects of the blessing which he had been instrumental in conferring on his country."

The culture of the potato in the rest of Europe appears not to have attained to any extent till during the last century. It was introduced into Sweden in 1720; but notwithstanding the exertions of Linnæus, it did not come into general cultivation till aided by a royal edict in 1764. In Switzerland it met with more favour; the inhabitants in a few years growing not only sufficient potatoes for their common consumption, but drying them and grinding them into flour for bread. In Poland also the potato is cultivated to an extraordinary extent.

In some parts of India, especially Bengal, the cultivation of the potato has been introduced with every prospect of success; it was at first very unpopular, but is now regarded as a valuable article of food. Attempts have been vainly made to cultivate this root in Ceylon; that island is in general too hot, and it thrives in one spot in the interior only, whence a basket full is sent every morning for the supply of the governor's table.

CARROT.—*DAUCUS CARROTA.*

PENTANDRIA DIGYNIA. *Linn.*—*Nat. Ord.* UMBELLIFERÆ.

This root, valuable to the agriculturist, and welcome at our tables, is indigenous in most parts of Britain; but in its uncultivated state it is entirely useless. The carrot was certainly known to the ancients; Pliny says that the best esteemed came from Candia, and next to them from Achaia; adding that in whatever country they grow the best are produced in sound dry ground, and that even wild carrots are never to be found in a poor hungry soil. The ancients used the seed both of the wild and cultivated plant as a medicine against the bite of serpents. According to Gerard, the true Daucus of the ancients is found also upon the mountains of Germany, upon the Jura, and others about Geneva, whence it has spread into sundry regions.

We are indebted to the Flemings who fled hither from the tyranny of Philip II., in the reign of Elizabeth, for the cul-

tivation of this excellent vegetable. Finding the soil about Sandwich in Kent favourable to its culture, these unhappy emigrants engaged in its production at that spot; it was next cultivated in Essex, and speedily throughout England. Parkinson, botanist to James I., tells us that the ladies of his time used to ornament their bonnets with the leaves of the wild carrot, which in autumn are extremely beautiful.

There are many varieties of the cultivated carrot, probably reducible to the two kinds called the horn and the long carrot, the first of these being subdivided into other kinds, differing in size and colour. The red, or large field carrot, is chiefly cultivated as food for cattle; and as a material for colouring butter. The orange variety is more delicate in flavour; the early red horn kind is the forwardest in ripening, and the best adapted for forcing. There are white and purple varieties of this, which are common in France, but rarely grown in this country. The horn carrot, having a short and small root, is a good crop for a shallow soil, but it does not keep so well through the winter as the common sort.

The carrot consists of two different substances; the inner is the wood; and the outer, which is of a darker colour, more pulpy consistence, and sweeter and more nutritious than the inner part; this is the bark; and the object of the cultivator is to obtain the root with the smallest possible proportionate quantity of wood. The garden carrot delights in a warm sandy soil, which should be dug deeply that the roots may easily run down; any obstruction causing them to *fork*, as it is called, and throw out lateral branches.

The carrot contains a large quantity of saccharine matter, to which it owes its antiseptic qualities. Various, but unsuccessful attempts have been made to extract sugar from the root, a thick syrupy matter which refuses to crystallize can alone be obtained; it has, however, been successfully employed in distillation, ten pounds weight of carrots yielding about half a pint of very strong ardent spirit. A syrup made from these roots, and clarified with the whites of eggs, has been found useful for many purposes; among others, for allaying the cough in consumption.

Crickets are so fond of carrots that they may be easily destroyed by making a paste of flour, powdered arsenic, and scraped carrots, and placing it near their haunts.

PARSNIP.—*PASTINACA SATIVA.*

PENTANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* UMBELLIFERÆ.

This root is also a native of Britain, and like the carrot a biennial, but more strong and hardy. One variety only is cultivated in this country, though there are many sub-varieties, according to the soil upon which it is grown. In other countries the varieties are more numerous; in France there are three sorts; the Coquaine, which has a long root and grows tall; the Lisbonnaise, which has a shorter and thicker root; and the Siam, which is small, and of a yellowish tinge; this is more tender and of a richer flavour than the other varieties.

In Scotland parsnips are eaten beat up with potatoes and a little butter; in Ireland an agreeable beverage is prepared from the roots brewed with hops. Wine is also made from them, and a pure spirit is obtained from parsnips. In Catholic countries this root is more abundantly employed for human food than in Britain, where it is not held in so much estimation as formerly; the use of it being greatly confined to Lent, when it accompanies salt fish, more as the relic of an old custom than for any particular agreement of flavour.

SKIRRET.—*SIAM SISARUM.*

PENTANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* UMBELLIFERÆ.

This plant is one of those now neglected for others more pleasant to our refined taste; but it was held in such estimation by the Romans, that the Emperor Tiberius caused it to be brought from the banks of the Rhine for the use of his table. It is not a native of England, nor indeed of Europe; it is indigenous to China, but was known in British horticulture in the sixteenth century; and is noticed by Worledge in the latter end of the seventeenth, as the whitest, sweetest, and most wholesome of roots. For some time after the skirret had become neglected in the gardens of the rich, it continued an object of culture among the poor in a few remote parts of the country; but it has now yielded to the potato, and is found in the north of Scotland only, where it bears the name of *crummack*.

SCORZONERA.—*SCORZONERA HISPANICA.*

SYNGENESIA ÆQUALIS, *Linn.*—*Nat. Ord.* COMPOSITÆ.

This root is indigenous to Spain, and was introduced into this country some years after the skirret. It was first known on account of its supposed medicinal properties as an antidote to the poison of a snake called in Spain *scurzo*. A Moor first discovered this property, and performed many cures by it, keeping his secret carefully, till having been observed to gather the plant among the mountains, the knowledge was quickly disseminated. A plant, accompanied with a drawing, was sent to Melchior, physician to the Queen of Bohemia; and soon after Monardes published a tract in praise of its virtues. Meanwhile it was used as an edible vegetable in Spain, and thence about the beginning of the seventeenth century introduced into France.

Scorzonera is at present much more used on the continent than in this country; its medicinal virtues are, however, but little regarded.

THE JERUSALEM ARTICHOKE.—*HELIANTHUS TUBEROSUS.*

SYNGENESIA FRUSTANEA, *Linn.*—*Nat. Ord.* COMPOSITÆ.

This plant is a native of Brazil, and was introduced into this country in 1167, where it was much esteemed before potatoes were generally used. It derives its name from the similarity of its flavour to that of the bottom of the artichoke; its distinctive epithet is said to be a corruption of the Italian word for sunflower, *girasole; girare*, to turn, and *sole*, the sun, bearing no reference to the city of Jerusalem. The plant is hardy, but rarely flowers in this country; it is, however, very readily propagated by the roots, as if but a piece of a tuber be left when digging up the roots, a plant will spring up from it, so that when it has been once placed in a garden it is extremely difficult to extirpate it; cultivation, however, is amply repaid by the superiority of the roots which are regularly planted. It is an excellent winter vegetable, wholesome, nutritious, and savoury; and either boiled, stewed, or made into soup, affords an agreeable variety for the table.

BEET.—*BETA.*

PENTANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* CHENOPODEÆ.

This plant takes its name from the shape of its seed-vessel, resembling the second letter of the Greek alphabet. It is a native of Sicily, and was held in great esteem by the Greeks, who used to offer it, on silver, at the shrine of Apollo at Delphos; Pliny has given an accurate description of it. The beet was first cultivated in England in 1548, but it has been supposed that it was brought hither by the Romans, although only partially cultivated. It was grown at Lambeth by Tradescant in 1656; and the white variety was brought to England from Portugal in 1570. The red beet is the most used in England for culinary purposes; the larger the roots grow the more tender they will be, and the deeper the colour the more they are esteemed. The culture of beet as an esculent has not increased of late years, nor is it generally a favourite vegetable for the table, although, according to Sir H. Davy's analysis, it contains much more nutritive matter than any other root excepting the potato.

The white beet is seldom, if ever, used as human food, but it is largely cultivated for the nourishment of domestic animals; there are several varieties of the red also used for this purpose, which are considered more hardy than the white; the kind called by the German name *Mangol wurtzel* is well known. The leaves also of the white beet are used for culinary purposes, either eaten as spinach, or in soups.

The existence of a certain quantity of saccharine matter in beet-root was discovered by the Persian chemist Margraff, about the year 1747, but no attempt was then made to profit by the discovery. Forty years after, M. Achard, of Berlin, resumed the experiments; and at the enforcement of the Milan decrees in 1809, the public dissatisfaction induced Buonaparte to patronise the manufacture of beet-root sugar. The process succeeded, but the price was enormous; and in 1814, when the ports of France were again opened to the produce of the West Indies, the foreign sugar swept the beet-root manufacture entirely away. But sugars from the English colonies found their way into France, and in order to protect the French colonies, duties were imposed. In 1816 a law was made favouring the beet-root sugar manu-

facturers, and in 1829 there were 101 manufactories of this article in full employment. It is unnecessary to enter into a description of the process here, nor can we afford it sufficient room.

THEBEAN.—*VICIA FABA.*

DIADELPHIA DECANDRIA, *Linn.*—*Nat. Ord.* PAPILIONACEÆ.

This well known and valued pulse, although cultivated in England from very remote ages, is not supposed to be indigenous in our island. It was well known to the ancients who held it sacred, some authors say because its pod resembles the *ark* of Noah in form, and in gratitude for the preservation of that patriarch the bean was forbidden to be eaten; other writers give other reasons; be this as it may, the Romans had, we know, a feast called Fabaria at which beans were presented to the God. The Egyptians likewise held the bean in great estimation as connected with their sacred mysteries, and in that country the great philosopher of antiquity, Pythagoras, learned the precepts which led to much of the knowledge upon which the present age prides itself.

The Athenians used sodden beans in their feasts dedicated to Apollo; they were also used in taking the votes of the people, and in the election of magistrates. When bruised and boiled in garlic they were said to cure coughs which were beyond other remedy. The meal of beans, which is the heaviest made from pulse, was called in Latin *lomentum*, and was eaten with whole corn in a gruel or pottage; this meal or flour was a celebrated cosmetic with the Roman ladies, being thought to possess the virtue of smoothing the skin and taking away wrinkles; bean-flower water is still much esteemed in this country for removing tan from the complexion.

Pliny says that beans enrich the land extremely, and that in Macedonia and Thessaly the custom was to plough them into the ground just as they began to bloom. The bean is indigenous in Marocco; and from Mazagan, a settlement of the Portuguese on that coast, we have obtained the kind so called, the most advantageous for an early crop. But as this vegetable has been cultivated in England from very remote antiquity, probably its introduction is among the benefits

which we owe to the Romans. The kind called by us the Windsor bean is said to have been first cultivated in that neighbourhood by some of the Dutch gardeners who came over at the Revolution.

The bean was transplanted by the Moors into Spain, and by the Portuguese into their own country; it is also grown abundantly in Barbary, where, stewed with oil and garlic, it forms the principal food of persons of all classes.

The bean flower emits a delicious perfume, and contains a great deal of honey. It is observable that these characteristics belong especially to flowers which have none, or but a small, or a coloured calyx.

THE PEA.—*PISUM SATIVUM.*

DIADELPHIA DECANDRIA, *Linn.*—*Nat. Ord.* PAPILIONACEÆ.

This pulse was named by the ancients *Pisoa*, from Pisa, a town of Elis, where peas anciently grew in great plenty; from this word our English name is derived, it being called *peason* by Tusser and Gerard. The earliest kind of which we have any mention is lentils, *lens*, supposed to be the species of tare for which Esau sold his birthright. Pliny says they are so called because the eating of them made men mild and patient, wherefore they were called *lenti*. The English lentil or tare is seldom cultivated; the French lentil is of much larger growth, and is cultivated on the continent for culinary purposes. Lentils appear to have been brought to this country in 1548; they are said to be the best food for pigeons.

The native country of the common pea is unknown; France has been named with some probability, or it may have been brought from Egypt or Syria. It was probably first cultivated here in the reign of Henry VIII., as Tusser names it as a dainty, and says it is "good for the purse and the pot." Peas were still rare in the early part of Elizabeth's reign, when, Fuller observes, they were seldom seen, except those which were brought from Holland, which were "dainties for ladies," but in the latter part of that reign, gardening made rapid progress in this country, and Gerard describes several kinds of peas as grown here. The pea was early cultivated in Scotland; in 1299 an English force besieging the castle of Lothian were obliged to have recourse to the

beans and peas of the surrounding fields to save them from famine.

The principal varieties of the common pea are the white or yellow, and the grey. The sub-varieties are never-ending, and are divided into early and late; for a description of these we refer our readers to our "KITCHEN GARDENER'S MANUAL."

The Sea pea—*Pisum maritimum*—is a native of this country, and may have been one of those vegetables which the Romans found growing upon the sandy downs of the shore where they landed. It differs from the other esculent peas in being a perennial, the root striking deeply into the ground among stones and sands by the sea shore. The pea is hard and indigestible, but it is said to have saved many persons from perishing by famine in the year 1555.

The Chick pea—*Cicer arietinum*—is a native of the south of Europe, and is but little known in England, although it was introduced as early as the lentil. The ancient Hebrews made use of lentils and chick peas as their common provision when they took the field; and the latter pulse, when parched in a frying pan, is considered in Egypt and Syria the best food for those who undertake long journeys; probably because by stimulating the secretion of saliva, the torment of thirst is lessened.

THE KIDNEY BEAN.—*PHASEOLUS.*

DIADELPHIA DECANDRIA, *Linn.*—*Nat. Ord.* PAPILIONACEÆ.

The kidney bean seems to be indigenous in every quarter of the globe except Europe, and cultivated in almost every civilized country of both hemispheres. Two species are grown in England; the Dwarf kidney bean, *Phaseolus vulgaris*, a native of India, but called the French bean; and the Scarlet runner, *Phaseolus multiflorus*. The first probably came to us from Italy, as the old French name is Fêves de Rome, and in the time of Elizabeth it was called the Roman bean; the Dutch called it Turk's bean, and perhaps it was brought from Asia at a much earlier period, during the constant communication between Piedmont and Turkey in Asia. It was introduced into England from the Netherlands about 1509, and was in common cultivation here in 1597. In England the immature pod only is used as a legume; but

in France the plant is cultivated as a field crop to supply the ripe seeds called *Haricots*, a favourite edible in that country, as well as in Spain, Portugal, and Italy. The Nubians boil the leaves of the kidney bean, and consider it an excellent dish; Major Denham mentions four kinds of bean raised in Bornou; a paste made of beans and fish was the only eatable which this traveller and his companions could find in the towns near the river.

The scarlet runner was brought into this country from South America, in 1633, and was first cultivated at Lambeth by Tradescant. Its flowers were in great favour for nosegays; but its legumes did not come into general use as an edible vegetable until brought into notice by Millar in the eighteenth century.

Both species are tender plants, and seldom thrive if they are sown very early in the season; but in favourable weather they are prolific bearers. The scarlet runner especially seems almost inexhaustible, and has some advantages over the white variety. It may be trained to poles, or by strings, and therefore takes less room; it is less impatient of drought, as the thickness of its foliage protects the root; and it is much less fatiguing to gather; these are great recommendations, while if gathered while quite young, the pods are more juicy and quite as sweet as those of the French bean.

ALLIACEOUS PLANTS.

These plants consists of bulbous roots, of the natural order *Asphodeleæ*, so called from the asphodel, which, though not a native of Britain, is an inhabitant of our gardens. A bulb is in reality not a root, but a bud containing the parts hereafter to be developed. Bulbs are not very nourishing, but their pungency renders them useful, and they are great favourites with the lower classes in all countries.

THE ONION.—*ALLIUM CEPA.*

HEXANDRIA MONOGYNIA, *Linn.*—*Nat. Ord.* ASPHODELEÆ.

The onion has been used in this country from the earliest period, and we have no record of its introduction; but we

may presume that it is not indigenous, since the mild and large roots which are imported from warmer climates deteriorate both in size and sweetness after having been cultivated for a few years in England. The onion called the Strasbourg, and its varieties, appear to be the most naturalized here, being the hardiest.

We read in the Bible of the Israelites murmuring for the onions, leeks, and garlic, of the Egyptians during their sojourn in the desert; this vegetable was worshipped on the banks of the Nile, "on account," says an ingenious writer of our day, "of the similarity of its coats to the planetary spheres." In India the onion is sacred, and not allowed to be eaten. Hasselquist praises the exquisite flavour of the Egyptian onion, which is eaten divided into four parts and roasted with bits of meat; they are likewise made into a delicious soup. Major Denham noticed the very large quantity of onions grown in Bornou, where it was almost the only vegetable except beans. It is singular, that although the onion appears to have been the common seasoning for meats from the earliest time to the present, that its native country is unknown; Pliny, who mentions all the countries from whence the ancients procured different varieties of this root, says he could not discover that they ever grew wild. The different kinds were named from the places which produced them, and among these the Gnidian onion was the mildest. Modern experience confirms the ancient observation that those bulbs which have a tinge of red or purple are more pungent than the white kinds.

We learn from Bradley, who wrote in 1718, how much this vegetable was then esteemed. He mentions the potato very slightingly, as we have before observed, but passes on to the onion as "a root more generally used in the kitchen than any other;" praising the Spanish kind as the sweetest. Lord Bacon also praises the onion very highly, and gives some curious directions for its culture, from which it seems that he practised the modern plan of transplanting, recommending it to be done "in the increase of the moon." It is found that in those countries in which the onion comes to the greatest perfection, the practice of transplanting it prevails. Worledge was the first who recommended this, and Mr. Knight has made some valuable experiments, which are described in the Horticultural Transactions.

The Welsh onion, or Ciboule—*Allium Fistulosum*—is a

native of Siberia, and was first cultivated in Britain in 1629. It is hardy, strong in flavour, and does not form a bulb. It is much less cultivated now than formerly, being merely raised for a spring crop.

The Tree, or Bulb-bearing onion—*Allium Cepa*, var. *Viviparum*—is a singular variety, bearing instead of seeds, a crop of bulbs which drop off, and vegetate upon the ground. It is more an object of curiosity than use, and is said to have been brought hither from Canada, but its history is little known.

The ground or potato onion is another variety, producing, by the formation of young bulbs on the parent root, an ample crop below the surface. This plant has been said to have been brought from Egypt by the British army in the early part of the present century; but it was known and cultivated in the south and west of England some years previously. It is hardy, and is valuable as producing a good crop in a small space of ground.

The Chive—*Allium schænoprasum*—is the smallest, though one of the finest flavoured of the genus. It is a hardy perennial plant, an inhabitant of Siberia, and said to be a native of Britain, though rarely found growing in a wild state. The leaves, which resemble small rushes, are used for salads and soups in the spring, but are little cultivated by cottagers.

The Leek—*Allium porrum*—is said to be indigenous in Switzerland; it is mentioned by Tusser as early as 1562, and probably was in cultivation here prior to that time; Shakspeare refers the adoption of the leek as the national badge of Wales to the battle of Cressy. Leeks are mentioned in the Bible as used in Egypt, and Pliny says that in his time the best came from that country, and the next in quality to them, from the neighbourhood of Ephesus. The Emperor Nero used to eat them in great quantities to improve his voice. The culture of the leek is similar to that of the onion.

Garlic—*Allium sativum*—is the species from which the genus takes its name. It is a native of the south of Europe, being still found wild in Sicily and the south of France. It was well known to the ancients and much esteemed by them; the Romans gave it to their labourers to strengthen them, and to their soldiers in order to excite their courage. Tusser mentions the garlic as cultivated here in his time, it seems to have been introduced in 1548. Several species of this plant are found growing naturally in various countries.

Three species, the sand garlic, the crow garlic, and the leek garlic, are found natives in some parts of Britain, but they have not been found worthy of culture.

The Shallot—*Allium Ascalonium*—derives its name from Ascalon in Syria, whence the Greeks first procured it. The time of its introduction into this country is not known; some writers think that we owe it to the crusaders. Turner mentions it as a well known plant in his "Signes of Herbs," published in 1548. The shallot is easily propagated from its small roots or offsets, and is perfectly hardy, but liable to be attacked by insects. The flavour is much more pungent than that of garlic, but not nearly so rank.

ACETARIOUS PLANTS.

This division comprises those vegetables which are eaten raw, either in their natural state or blanched; they contain but little nourishment, but are regarded as agreeable accompaniments to a meal, from their coolness or pungency.

LETTUCE.—*LACTUCA SATIVA.*

SYNGENESIA ÆQUALIS, *Linn.*—*Nat. Ord.* COMPOSITÆ.

This vegetable seems to have derived its name from the milky juice with which it abounds. The Romans called it *Lac*, and the French still call it *Laitue* for the same reason. Herodotus, the first writer who endeavoured to separate history from fable, and whose delightful work is at length beginning to obtain the credibility which it merits, relates an anecdote of Cambyses, the conqueror of Egypt, which proves that lettuces were served in their natural state at the tables of the Persian kings at that period, 550 B. C. In the time of Pliny the Romans had many varieties of this vegetable, among them the purple with a large root, *Cæciliana;* and the Greek lettuce, a kind which grew both high and large; of these the white variety was noticed, as being even under that southern sky, unable to endure cold.

We do not know exactly at what period the lettuce was introduced into England, but Turner mentions it in 1652, as being not a rare or recently cultivated plant, but one with which the public generally had been long familiar. In the

privy purse expenses of Henry VIII. in 1530, it is said that the gardener at York Place received a reward for bringing lettuce and cherries to Hampton Court; and in 1597, Gerard gives an account of eight kinds of lettuce that were then cultivated in England. He says that this vegetable was served up at the beginning of supper, and eaten before any other meat, in order to "stir up appetite," and after supper to "keep away drunkenness." Thirty varieties of the lettuce are now cultivated in the neighbourhood of London; some are natives of Egypt, others of America and the West Indies; the Cos lettuce, by many persons preferred to the cabbage lettuce, is a native of the island of that name. The other varieties may be classed under the two heads of the cos or cabbage lettuce, according to the manner of their growth, whether the head and the leaves which compose it be oblong or round.

ENDIVE.—*CICHORIUM ENDIVIA.*

SYNGENESIA ÆQUALIS, *Linn.*—*Nat. Ord.* COMPOSITÆ.

This herb is a species of Succory. It is mentioned by Ovid in his tale of Baucis and Philemon, and Pliny notices it as possessing medicinal properties; its juice mixed with rose oil and vinegar was used to allay pains in the head. It is one of the plants with which the magicians, in credulous ages, used to endeavour to impose on their too easily seduced believers. Endive is largely cultivated, if not growing wild, in China and Japan; and botanical writers say that the common garden endive is a native of the East Indies. It appears to have been first cultivated in England in the reign of Edward VI., 1548; and it now furnishes a valuable salad at a period of the year when few other fresh vegetables can be procured.

Succory, Chicory, or Wild endive,—*Cichorium intybus*—is indigenous in England on chalky soils, and was formerly used as a pot-herb and salad; it is now neglected by us; but it is used on the continent in a variety of ways, one of which is, by drying and slicing the root, after which it is ground with coffee in order to improve the flavour of the latter.

The blanched leaves of the Dandelion, *Leontodon*, which

belongs to the same family as the herbs last mentioned, are also occasionally used in salads when lettuce and endive cannot be procured.

GARDEN CRESS.—*LEPIDIUM SATIVUM.*

TETRADYNAMIA SILICULOSA, *Linn.*—*Nat. Ord.* CRUCIFERÆ.

This useful and welcome little vegetable is a hardy annual, not found wild in England. It is a native of Persia, and also Cyprus, whence it was brought into this country about the middle of the sixteenth century, and is now the earliest of our spring herbs. A constant supply may be obtained by sowing the seed every week, and with but little artificial heat this may be continued through the winter.

MUSTARD.—*SINAPIS.*

TETRADYNAMIA SILIQUOSA, *Linn.*—*Nat. Ord.* CRUCIFERÆ.

The spring herb which is eaten with the garden cress is the *sinapis alba*, indigenous in England and often found growing wild among corn. It germinates even more readily than cress; the seeds sown on wet flannel quickly put forth leaves.

The species of mustard which is cultivated for the use of its seeds is the *sinapis nigra*, which according to Pliny is indigenous in Italy, but the best seed came from Egypt. The Romans made great use of it in medicine in a variety of ways, and they likewise ate the leaves of the older plants boiled. Tusser, who wrote in the reign of Queen Mary, in his Husbandry, says, in the directions for February,

> " Where banks be amended, or newly upcast,
> Sow mustard seed after a shower be past."

According to Gerard mustard had not become common in Elizabeth's reign, but he distributed the seed into different parts of England in order to make it known. Mustard was not manufactured in his day, but was brought to table whole, or bruised in vinegar. Another writer in 1657 observes, " In Gloucestershire, about Tewkesbury, they grind it, and make it up into balls, which are brought to London and

other remote places, as being the best that the world affords." The Durham mustard is now reckoned the best.

FENNEL.—*FŒNICULUM VULGARE.*

PENTANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* UMBELLIFERÆ.

The French writers on herbs state that this plant was originally brought from Syria, but English botanists consider it a native of this country. It is found growing plentifully on chalky cliffs near the sea, and in the neighbourhood of Feversham, in Kent; likewise between Worthing and Brighton. The Sweet fennel—*Fœniculum dulce*—comes from Syria and the Azores; this is probably the kind mentioned by French authors; it is cultivated in Italy as a salad herb, under the name of *Finochia*, and is sometimes grown in England; but it soon degenerates here into the common fennel, and the seed requires to be annually obtained from Italy; when blanched like celery it is very tender and crisp.

The principal use of our common fennel is as a sauce for mackerel; in France it is in more general request as an ingredient in soups. According to the old writers, a decoction of its leaves is good to strengthen the sight; and the Romons drank the seeds steeped in wine as a remedy for the sting of scorpions or serpents. It was used by this people very generally in the kitchen, few meats being seasoned without it; and the bakers placed fennel leaves under their loaves in the oven in order to give a pleasant taste to their bread. Boerhaave says that the root resembles in taste, smell, and medicinal quality, the ginseng of the Chinese; but this has been doubted by other writers.

CELERY.—*APIUM GRAVEOLENS.*

PENTANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* UMBELLIFERÆ.

This plant is a native of Britain, but it is not edible in its wild state, both the perfume and taste being disagreeable. Several varieties are produced by cultivation; among them the white and red are principally distinguished; the latter kind is the more hardy, and fitter for soups than to be

eaten raw. It is customary in England to blanch the stalks, but in Italy the unblanched leaves are eaten in soups.

The turnip-rooted celery, or *Celeriac*, is more hardy than the upright varieties; of this the root is the only part used. It attains to a considerable size, especially in Germany, where it is much esteemed both prepared by itself and in conjunction with other herbs as a salad; the outer coat and fibres being taken off. Celeriac is occasionally imported from Hamburgh into this country, but it is rarely cultivated here. Sir J. Banks and Dr. Solander found the wild celery in considerable quantities on the coast of Terra del Fuego.

PARSLEY.—*APIUM PETROSELINUM.*

PENTANDRIA DIGYNIA, *Linn.*—*Nat. Ord.* UMBELLIFERÆ.

The common garden parsley with curled leaves is said to be a native of Sardinia. It was in great request with the Romans, and was known to the Greeks, from whom we have the distinctive appellation. The tall parsley was one of the viands used at funeral feasts.

The garden parsley was not cultivated in England till the second year of Edward VI., 1548; but it was probably introduced here long before that period. There are now several varieties; the plain leaved was the first known here, but the curled leaved has now nearly superseded it, on account of the superior beauty of its leaves, and their greater delicacy of flavour.

A plant much resembling parsley is the lesser hemlock, *Æthusa cynapium*, called also "fool's parsley," which is a noxious weed of a poisonous nature, infesting gardens and fields. An unobservant person might confound the leaves of the weed with those of the garden herb; but if bruised, the former emit an unpleasant smell, and the flower is somewhat different. Nevertheless care is requisite where the plain leaved parsley is grown, and perhaps this has increased the cultivation of the curled variety.

RADISH.—*RAPHANUS SATIVUS.*

TETRADYNAMIA SILIQUOSA. *Linn.*—*Nat. Ord.* SILIQUOSA.

The Greeks named this plant *Raphanos* from the speed with which it grows; it was esteemed by them above most other roots, and presented at the shrine of Apollo at Delphos in beaten gold; three kinds seem to have been known to them. Pliny says that the radishes of Egypt were better and sweeter than any other in the world, because they were watered with brackish water. The same writer describes a kind of radish called *Algicleuse*, which were so clear and transparent that one might see through them; he adds "the most esteemed are those that have been raised from seeds lately brought out of Syria." The largest came from Germany, where, according to Pliny, the root sometimes weighed forty pounds; which size was gained by stripping off the leaves.

The garden radish is generally supposed to have been brought from China, but the accounts given above shew that its culture is of great antiquity, although it was not grown in England before 1548. Bullein, who wrote in 1562, says; "of radish roots there be no small store growing about the famous city of London: they be more plentiful than profitable, and more noisome than nourishing to man's nature." Gerard cultivated four kinds of radishes in Queen Elizabeth's reign; they were eaten raw as at present, but when boiled in broth were considered good for a cough. The ancients used them boiled, and they are thus eaten at the present day in Portugal; but we speak from experience when we say that they are very tasteless thus cooked. The peasants of Lyons and Auvergne roast them under the ashes, and put them also into soup, to which they give an agreeable flavour. The radishes of Zietau, in the neighbourhood of Brandenburg, are still in great esteem.

HORSE-RADISH.—*COCHLEARIA ARMORACIA.*

TETRADYNAMIA SILICULOSA, *Linn.*—*Nat. Ord.* SILIQUOSÆ.

This plant, which is of a distinct family from the radish, is a native of some marshy situations in Britain, but it was not cultivated for the table till after the year 1597, being

merely used in medicine. Coles, in 1657, says it was used among the Germans, " and sometimes by gentlemen with us too, for sauce to eat fish with," but he praises it more for its medicinal qualities. Horse-radish scraped and infused in cold milk is a good and safe cosmetic.

SAFFRON.—*CROCUS SATIVUS.*

TRIANDRIA MONOGYNIA, *Linn.*—*Nat. Ord.* TRIDEÆ.

" Thick new-born violets a soft carpet spread,
And clust'ring lotos swell'd the rising bed,
And sudden hyacinths the turf bestrow,
And flow'ry crocus made the mountain glow."
ILIAD.

Thus does Homer notice this beautiful flower, which has even been supposed to be the *Nepenthe* of the ancient poet. The Greek name may be derived from *Krokis*, signifying a thread or hair, because saffron, when dry and in strings, has that appearance. Morier says that the mountain Corycus, in Asia Minor, abounded in crocuses, and hence the name of the plant *Chorukim* in the Hebrew. Loudon derives crocus from *Krokice*, Chaldee. The English word Saffron is derived from *Zahafrane*, the Arabian name of this plant, which is nearly the same in the French, Dutch, and German languages.

The ancients made great use of saffron; that from Sicily was used by the Romans as a perfume. Pliny tells us that it was steeped in wine, and then sprinkled over the theatres, filling every part of the building with a sweet odour. Small rills of water scented with extract of saffron were caused to flow through the apartments; and balsams and salves were also scented with it.

Saffron was probably brought to us originally direct from Asia; it is said in Hakluyt's Voyages, that the first root was brought here in the reign of Edward III., by a pilgrim, who hollowed out his staff on purpose to conceal it, for if it had been discovered, he would, by the laws of the country, have been liable to death. Chardin says that much saffron of a good kind was cultivated in Persia in his time; the Arabs are supposed to have brought it to Spain, where it is now produced; and it likewise grows in Sicily and France; but the English saffron is esteemed the best. The Spanish is

generally deteriorated by having been dipped into oil to secure its keeping. In none of these countries does it ripen its seed, a sure proof that the plant is not indigenous. The earliest accounts we have of its being cultivated in England, mention that it was grown near a Roman road running through Essex; this was doubtless at Saffron Walden, where Camden observes, in 1586, that the fields all around make a show with this plant. A charter to the town was granted in the third year of Edward VI., and the arms bear three saffron plants. Tusser, 1553, notices saffron as a common produce in Essex; and Gerard, in 1597, makes a like mention of it.

The saffron crocus flowers in September; the blossom is extremely beautiful, resembling in form the spring crocus, but of a rich violet colour, and having a bright golden pistil, three-cleft; this is the part containing the saffron.

It is sometimes adulterated with the petals of the *Carthaucus tinctorius*, or with those of the common marigold, *Calendula officinalis;* this may be detected by infusing the cake in hot water, when the expanded stigmas will be easily distinguished from the petals of the other flowers.

The saffron crocus has sometimes been confounded with the *Colchicum autumnale*, a native of England of the Hexandria Trigynia class. The plant deserves notice for its singular habit of sending forth the blossom unaccompanied by any leaves; the latter appear in spring and are very handsome, they die away, and in September the flower stalk shoots up from the bulb, growing in a warm place to the height of nearly half a foot. The root may then be taken out of the ground, and it will continue to blossom merely placed in a cup or saucer.

" While other flowers in beauty vie
To decorate the scene,
Colchicum but to summer gives
Her leaves of shining green;
Reserving her taper lilac flow'rs,
To enliven autumn's fading hours.

RHUBARB.—*RHEUM.*

This is a plant of the dock kind. The ancient Greeks called it *Rhabarbarum*, from its growing on the banks of the Rha, now the Wolga; but some writers think that the

Rheum of the ancients was not the same as that now in use. The later Greeks are said to have called it *Barbaricum* because it was brought to Barbary, whence it was sent to other countries.

The root of the *Rheum palmatum* is the medicinal drug; it was brought from the Levant, and not till 1758 was it known from what particular plant it was procured; in that year it was introduced and cultivated in this country by Dr. John Hope. The plant is handsome, but as the parts used for culinary purposes, the foot-stalks of the radical leaves, are much smaller than those of the other kinds, it is not in general cultivation.

Monk Rhubarb—*Rheum Rhaponticum*—is also a native of Asia, but of what particular part is not known; nor is the exact time of its introduction here ascertained; Tusser mentions it as being cultivated in England in 1573; and Gerard notices it as Monk's rhubarb, "because, as it should seem, some monk or other have used the root hereof instead of rhubarb." From him we learn that it was considered both as a potherb and a medicinal plant.

The Hybrid Rhubarb—*Rheum Hybridum*—is a native of more northern parts of Asia than the others, and is of more recent introduction into Britain. It was first cultivated here by Dr. Fothergill, in 1778, but it did not come into general use as a culinary vegetable till several years after, having been introduced into our kitchen gardens for this purpose about forty years since. The stalks of the hybrid are much more succulent, as well as larger, than those of the monk rhubarb, which, therefore, cause it to be the preferable species for cultivation, although *Rheum undulatum*, called by gardeners Buck's, or the Elford rhubarb, has been found the finest in flavour.

G. Woodfall and Son, Printers, Angel Court, Skinner Street, London.