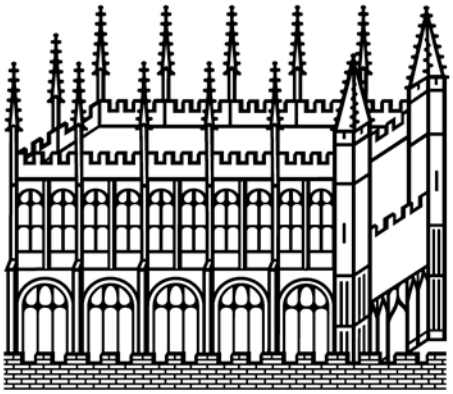

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# THE

# NATURAL HISTORY

# OF

# THE YEAR.

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# NATURAL HISTORY

OF

# THE YEAR;

BEING AN ENLARGEMENT OF

DR. AIKIN'S

CALENDAR OF NATURE.

BY ARTHUR AIKIN.

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# ADVERTISEMENT.

THE favour of the public having conducted *The Calendar of Nature* through three editions, the preſent Editor thought that he ſhould be performing no unacceptable office in making ſuch additions to it as modern diſcoveries in natural hiſtory have afforded. By the inſertion of ſome new articles from authors of the beſt credit, and the occaſional enlargement of ſome of the old ones, it was his intention to compoſe a hiſtory of the yearly operations of nature, if not perfect, yet, at leaſt as far as it went, correct.

For

For this purpoſe recourſe has been had to Mr. Pennant's valuable Zoological works, to Bomare's Dictionary of Natural Hiſtory, and to the admirable Natural Hiſtory of Selborne, by the late Mr. White. Other writers have been occaſionally conſulted, and a few circumſtances are inſerted for which the Editor is himſelf perſonally anſwerable. How far this edition is worthy of notice, it remains for that public to whom it is now offered to determine.

TO

JOHN AIKIN, M.D.

THIS

ENLARGED EDITION

OF HIS OWN

ORIGINAL WORK

IS INSCRIBED

BY

HIS TRULY AFFECTIONATE SON,

*ARTHUR AIKIN.*

# NATURAL HISTORY

OF

# THE YEAR.

THE portion of time here to be treated of, and which is called a *year*, is produced by the complete revolution of the earth round the ſun, a period of 365 days and nearly ſix hours. It is indifferent for the purpoſe of meaſuring time at what part of this period the beginning of the year is made, provided an exact account be kept of the return of the earth to the ſame point from which it ſet out. There are however four points in this annual revolution which are marked out by ſtriking diſtinctions. Theſe are the two *equinoxes* and the two *ſolſtices*.

In order to underſtand what theſe mean, we are firſt to obſerve, that while the earth

is revolving round the ſun, it is at the ſame time conſtantly ſpinning on its own axle, and thus ſucceſſively preſenting one half of its ſurface to the ſun, while the other half is turned from it. This makes the difference of day and night; for as each part of the ſurface comes in ſucceſſion to front the ſun, it is ſaid to be day in that part, as when it has turned from the ſun it is its night. Now if the axle of the earth were perpendicular to the plane in which it moves round the ſun, in other words, if it *ſpun upright*, it is obvious that the day and night would always be of equal length over the whole globe, every point of it having as much ſpace to paſs, turned towards the ſun, as turned from it. But this is not the caſe; for its axle is oblique, varying about $23\frac{1}{2}$ degrees from the perpendicular: for which reaſon, during half of the revolution the northern hemiſphere of the globe enjoys a greater portion of the ſun's light than the ſouthern, and conſequently its days

are longer than its nights: during the other half the oppoſite takes place, and its nights are longer than its days; and in the ſouthern hemiſphere the ſame happens, but at contrary times. It is only therefore on the central ring of the globe, called the equator, or equinoctial line, that the days and nights are always equal. In all the other parts they are equal only on two days in the year, called the vernal and autumnal equinoxes, which happen on or near March 25 and September 23. Midway between theſe points are the two ſolſtices; that of our ſummer, when the days in the northern hemiſphere are at their greateſt length, which is about June 21; and that of our winter, when they are ſhorteſt, about December 21: the reverſe taking place in the ſouthern hemiſphere.

The annexed figures with their explanations will give a better idea of theſe changes than can be conveyed in words, and will alſo ſhow that the difference be-

tween the days and nights goes on increaſing from the equator to the poles, at which laſt there is only one day and one night in the year. The ſame circumſtance, namely the obliquity of the earth's axis, is alſo the cauſe of the difference of the climates and ſeaſons with reſpect to *heat*. At the equator the rays of the ſun fall perpendicularly on the earth, and therefore act with more power; whence ariſes the great heat of that and the tropical regions, which extend to a certain diſtance from it on each ſide. On advancing towards both poles, the rays fall more and more obliquely, and therefore act with leſs and leſs force; whence this ſpace is occupied, firſt by the temperate zones extending on each ſide the tropics, and then by the frigid zones extending from theſe to the poles. So weak is the power of the ſun in theſe laſt, owing to the great obliquity with which its rays ſtrike the earth, that they are buried in almoſt perpetual ſnow and ice. Theſe differences

ferences are thoſe of *climate*. As to the differences of *ſeaſon*, they depend upon the length of time that the earth is expoſed to the rays of the ſun, as well as the greater or leſs directneſs with which the rays ſtrike it. During the ſhort days the influence of the ſun is leſs in both theſe reſpects, which therefore produces winter; during the long days it is greater, and therefore cauſes ſummer; and the middle ſeaſons of ſpring and autumn correſpond with the equality of nights and days: it is to be remarked, however, that this correſpondence is not perfectly exact, for the ſevereſt froſts uſually take place after the days have begun to lengthen, as the moſt oppreſſive heats are found to happen when the days are in the wane; the reaſon of which is, that the earth having imbibed more heat than it gave out during the ſummer months, is not exhauſted of its ſuperabundant warmth till about the cloſe of the year, or after the winter ſolſtice; in like manner, on account of the waſte of

the earth's heat being greater in winter than its ſupply, it continues to imbibe heat during the ſpring, and is not ſaturated till after the ſummer ſolſtice. Hence alſo ariſes the difference between the ſpring and autumn, though the poſition of the ſun with reſpect to the earth is in both the ſame: the heat of the ſpring is inferior to that of autumn both in regularity and degree, for, owing to the deficiency of warmth in the earth, it is conſtantly imbibing the floating heat of the lower part of the atmoſphere; hence originates a large collection of clouds, which intercepting the rays of the ſun, combines together with the abſorption of the earth to deprive the air of much of its heat. Whereas in autumn, the earth being hotter than the air, gives out regularly a large portion of warmth, which naturally tending to diſperſe the clouds, affords a free paſſage to the ſolar rays: thus autumn ought in general to be hotter than ſpring, for theſe two reaſons; firſt, that the earth

itſelf

itſelf gives out a conſiderable quantity of heat, and ſecondly, that the rays of the ſun meet with fewer interruptions in paſſing thence to the earth. At the equator there is no proper difference of ſeaſons, except as occaſioned by rainy or windy periods, which proceed from other cauſes, and the caſe is much the ſame on each ſide of it for ſome diſtance.

The iſland of Great Britain is ſituated in the northern hemiſphere, and in that part of the temperate zone which is nearer to the frigid than the torrid zone. Geographers divide the ſpace from the equator to the pole on each ſide into 90 degrees, which are called degrees of latitude; and beginning from the equator, they reckon the latitude of every place by the number of degrees it is diſtant north or ſouth from that line. Now Great Britain is comprehended between the 50th and 58½th degree of north latitude. Hence the difference of the light and heat, in the different ſeaſons of the year,

is very conſiderable among us; and all the variations in nature depending on theſe differences are ſtrongly marked. In London, which is about the latitude of $51\frac{1}{2}$, at the winter ſolſtice the ſun is only 7 hours 34 minutes above the horizon; at the ſummer ſolſtice it is 16 hours 26 minutes; and in the north of Scotland the difference is much greater.

# JANUARY.

Stern winter's icy breath, intenſely keen,
Now chills the blood, and withers every green;
Bright ſhines the azure ſky, ſerenely fair,
On driving ſnows obſcure the turbid air.

A YEAR is not only an aſtronomical, but a natural period, and the firſt imperfect year of ancient times muſt, no doubt, have originated from obſerving the regular viciſſitudes of heat and cold, of the leafing, flowering, and fruiting of the various tribes of vegetables; and the coincidence of theſe appearances, with the laying and hatching of birds, and the production of the young of quadrupeds. This way of reckoning, however, was ſubject to ſo many variations, that it was ſoon neceſſary to make choice of ſome more conſtant periodical occurrence by which to mark the annual revolution.

The ancient year began in the month of March, and it may appear ſingular that modern civilized nations ſhould chooſe to commence their year at a period when nature lies almoſt dormant, in preference to that ſeaſon when the race of vegetables and animals is actually renewed. In defence of the preſent cuſtom it may, however, be ſaid, that the time of the renovation of nature varies in different countries, and is affected ſo much by accidental circumſtances as to preclude the poſſibility of an exact calculation; that *now* the year does not commence till ten days after the winter ſolſtice, and that the lengthening of the day, as it is the chief cauſe, ſo it is in fact the commencement of ſpring.

So little influence, however, has this change at firſt, that the month of January is uſually found to be that in which the cold is moſt intenſe; there being little or no froſt in this country before the ſhorteſt day, conformably to the old ſaying, "as the

the days begin to lengthen, the froſt begins to ſtrengthen." The weather is commonly either bright dry froſt, or fog and ſnow, with cold dark ſhowers about the cloſe of the month.

It uſed formerly to be a ſubject of much diſpute among natural philoſophers, whether froſt was a particular ſubſtance, or merely the abſence of a certain degree of heat. Thomſon in his Seaſons ſeems to be of the former opinion.

What art thou, Froſt? and whence are thy keen
ſtores
Derived, thou ſecret, all invading power,
Whom even th' illuſive fluid cannot fly?
Myriads of little ſalts, or hook'd or ſhap'd
Like double wedges, and diffus'd immenſe
Thro' water, earth, and ether?

Modern philoſophers have, however, very generally embraced the oppoſite ſide of the queſtion; the *little hooked ſalts*, or ſpiculæ, which in froſty mornings are found floating in the atmoſphere, or ad-

hering to the ſurfaces of bodies, being found by experiment to be nothing more than ſmall cryſtals of ice, and capable of being reſolved by heat into pure water.

The principal difficulty in the theory is, that if froſt be only the abſence of heat, how comes it to paſs that water when deprived of its heat ſhould occupy more ſpace than it did before? for water when frozen is expanded, and hence ice is lighter than water, and ſwims upon it. The following explanation, however, will ſufficiently account for this fact, without ſuppoſing that froſt is a ſubſtance, which by an union with water increaſes the bulk of it. If any one will obſerve the proceſs of the formation of ice, he will perceive that it is compoſed of a number of needle-like cryſtals, that unite to each other at *angles* of a certain ſize; hence the ſpace between theſe cryſtals is much more conſiderable than between the particles of water,

water, and on this account water when frozen occupies more *ſpace* than before, though it receives no increaſe of weight. It may alſo be mentioned, that in the act of congelation a quantity of air is intercepted, and fixed in the ice, which generally appears to be full of bubbles. It is from this diſpoſition in water to cryſtallize at angles of a particular meaſurement, that, if a bottle full of water hard corked be ſet to freeze, the bottle will be broken for want of room for the *expanſion* of the water while aſſuming its ſolid form. Water-pipes often burſt from the ſame cauſe, and hoops fly off from barrels; and in the intenſe froſts of Canada it has been found from experiments made at Quebec, that cannons and bomb-ſhells filled with water, and the apertures ſtrongly plugged up, have in the courſe of a few hours been burſt. This ſame property of water when frozen, tends every year to diminiſh the bulk and height of the Alps

and

and other lofty mountains: the different fiſſures and crevices which become filled with water during the ſummer, either from rain or the melting of the ſnow, are frozen during the winter, and by their irreſiſtible expanſive power detach huge maſſes of rock from the ſummits of the mountains and roll them into the valleys below, to the terror of the inhabitants; for nothing but a wood is able to ſtop their impetuous and accelerated progreſs. In its more moderate and minute effects, the operation of this general law is productive of a very beneficial conſequence to the huſbandman; for the hard clods of the ploughed fields are looſened and broken to pieces by the ſwelling of the water within them when frozen; hence the earth is crumbled and prepared for receiving the ſeed in ſpring.

Nothing can be conceived more wonderful and ſtriking than the effects of froſt. To behold the liquid ſurface of the lake

lake changed into a firm marble-like pavement; to ſee the rapid river arreſted in the midſt of its courſe, the headlong caſcade, "whoſe idle torrents only *ſeem* to roar," converted into a cluſter of tranſlucid pillars of the moſt groteſque forms; or to view the intricate, varied, and beautiful cryſtallizations, that form on our windows during a winter's night; and all theſe effects produced by a rapid, ſilent, inviſible agency, cannot but ſtrongly intereſt the obſerver. Some of theſe appearances, indeed, are ſo familiar to us, that we ceaſe to regard them; but it is only their *frequency* that cauſes them to be overlooked, as is evident from the ſurpriſe and admiration which they excite in perſons, who, having been born and brought up in the Weſt-Indies or other hot climates, ſhow the greateſt ſurpriſe and pleaſure upon the firſt ſight of theſe phenomena.

Here

Here glittering turrets riſe, upbearing high
(Fantaſtic miſarrangement) on the roof
Large growth of what may ſeem the ſparkling trees
And ſhrubs of fairy-land. The cryſtal drops
That trickle down the branches, faſt congeal'd
Shoot into pillars of pellucid length,
And prop the pile they but adorned before.
Here grotto within grotto ſafe defies
The ſunbeam. There imboſs'd and fretted wild
The growing wonder takes a thouſand ſhapes
Capricious, in which fancy ſeeks in vain
The likeneſs of ſome object ſeen before.

COWPER'S TASK, V.

Snow is the water of clouds frozen. On a cloſe examination it is found to be compoſed of icy darts or ſtars united to each other, as all cryſtals of water are, whether they compoſe ice, ſnow, or hoar-froſt, at angles of 60 or 120 degrees. Its whiteneſs is owing to the ſmall particles into which it is divided, refracting and reflecting, inſtead of tranſmitting, all the rays of light that fall upon it. Ice when pounded becomes equally white. Snow is uſeful by covering the plants and protecting

tecting them from the ſeverity of the froſt; for it keeps them very dry; and at a certain depth under the ſnow the cold continues always of the ſame moderate temperature, namely, at 32 degrees, or juſt at the freezing point. It is, however, a very fatal enemy to ſhrubs that grow in a *ſouthern* expoſure, for the heat of the ſun at noon partially melts the ſnow, which by the cold of the following night is converted into a maſs of ice, and thus deſtroys the moſt flouriſhing and hardy plants; and it has frequently been found by experience in ſevere winters, that thoſe vegetables which have been expoſed to the rays of the ſun have been almoſt totally cut off, while thoſe under a north ſhelter have ſuſtained no injury.

The beauty of a country all clothed in new fallen ſnow is very ſtriking.

The cheriſh'd fields
Put on their winter robe of pureſt white.
'Tis brightneſs all; ſave where the new ſnow melts
Along the mazy current. Low the woods

Bow

Bow their hoar head; and ere the languid ſun
Faint from the weſt emits his evening ray,
Earth's univerſal face, deep-hid and chill,
Is one wide dazzling waſte, that buries deep
The works of man. THOMSON.

Hail-ſtones are drops of rain ſuddenly congealed into a hard maſs, ſo as to preſerve their figure. They often fall in the warmer ſeaſons of the year, as at all times the upper parts of the atmoſphere are very cold.

Hoar-froſt is dew or miſt frozen. It adheres to every object on which it falls, and produces figures of incomparable beauty and elegance. Every twig and blade of graſs is beſet by it with innumerable glittering pearly drops, or ſilvery plumage beyond the ſkill of any artiſt to imitate.

Sometimes it happens that a ſudden ſhower of rain falls during a froſt, and immediately turns to ice. A remarkable ſcene is then produced, which the following lines moſt beautifully deſcribe.

Ere

Ere yet the clouds let fall the treaſur'd ſnow,
Or winds begun thro' hazy ſkies to blow,
At ev'ning a keen eaſtern breeze aroſe,
And the deſcending rain unſullied froze.
Soon as the ſilent ſhades of night withdrew,
The ruddy morn diſclos'd at once to view
The face of nature in a rich diſguiſe,
And brighten'd every object to my eyes:
For every ſhrub, and every blade of graſs,
And every pointed thorn ſeem'd wrought in glaſs;
In pearls and rubies rich the hawthorns ſhow,
While thro' the ice the crimſon berries glow.
The thick-ſprung reeds the wat'ry marſhes yield,
Seem poliſh'd lances in a hoſtile field.
The ſtag, in limpid currents, with ſurpriſe,
Sees cryſtal branches on his forehead riſe.
The ſpreading oak, the beech, and tow'ring pine,
Glaz'd over, in the freezing ether ſhine.
The frighted birds the rattling branches ſhun,
That wave and glitter in the diſtant ſun.
When, if a ſudden guſt of wind ariſe,
The brittle foreſt into atom flies:
The cracking wood beneath the tempeſt bends,
And in a ſpangled ſhow'r the proſpect ends.

PHILIPS, *Lett. from Copenhagen.*

In ſuch a caſe prodigious miſchief has been done in the woods by the breaking down of vaſt arms of trees which were overloaded

overloaded by the weight of the incruſting ice; and even rooks, attempting to fly, have been taken, owing to their wings being frozen together, by the ſleet that congealed as it fell.

The inclemency of the ſeaſon is ſhown by its effects on animals. Thoſe which are called the *cold blooded*, that is, where the whole of the blood does not circulate through the lungs, as the frog, the ſnake, and the lizard, are benumbed by it in their winter quarters, and continue in this deathlike ſtate till the return of warm weather. Others, as the dormouſe, the marmot, and bear, ſleep away the greater part of this uncomfortable period; while others, as the ſquirrel and field mouſe, which lay up ſtores of proviſion during the autumn, keep cloſe in their retreats, ſleeping a good deal during the intenſity of the froſt, but, during the leſs ſevere part of the winter, being in an active ſtate, have recourſe to their hoards for a ſupply of ſubſiſtence. But animals in a ſtate of

ſleep

ſleep require nouriſhment, though not in ſuch large quantities as thoſe which continue actively alive; the neceſſity of food being proportioned to the rapidity of the circulation of the blood. Since, however, in a ſtate of torpor, it is impoſſible to take in nouriſhment, theſe animals muſt periſh, were it not for a ſtore of food prepared and laid up within them in the form of fat: for animals of this claſs become very fat before they retire to their winter habitations, and come out again in the ſpring lean and emaciated, as is the caſe with the bear, marmot, &c. With reſpect to the cold-blooded animals, which accumulate no fat, the continuance of their life is provided for by other means. All theſe animals are capable during their active ſtate of ſupporting the want of food for a great length of time; at which period the pulſations of the heart, which is the organ for circulating the blood, amount to about 60 in a minute; but during their *torpid* ſtate do not exceed the

ſame

ſame number in the ſpace of an hour; ſo that the pulſations of the heart during the three months of winter that they become inſenſible, amount to no more than the uſual number of 36 hours in their active ſtate, and their demand for nouriſhment is probably diminiſhed in the ſame proportion.

The other animals, that are not rendered torpid by the cold, yet feel very ſenſibly its effects, which are a deficiency of food and heat; to obviate theſe preſſing evils, the wild quadrupeds of prey by which this iſland is inhabited, ſuch as the fox, the weaſel, the polecat, and others, rendered bold by famine, make incurſions into the hen-rooſt and farm-yard: happily, however, we are acquainted only by report with thoſe formidable troops of wolves which at this ſeaſon occaſionally attack the villages among the Alps, and in other mountainous and woody parts of the continent: of theſe ravenous invaders Thomſon has given a moſt ſpirited deſcription.

By

By wint'ry famine rous'd, from all the tract
Of horrid mountains which the ſhining Alps,
And wavy Appenine, and Pyrenees,
Branch out ſtupendous into diſtant lands;
Cruel as death, and hungry as the grave!
Burning for blood! bony, and ghaunt, and grim!
Aſſembling *wolves* in raging troops deſcend;
And, pouring o'er the country, bear along,
Keen as the north-wind ſweeps the gloſſy ſnow.
All is their prize. They faſten on the ſteed,
Preſs him to earth, and pierce his mighty heart,
Nor can the bull his awful front defend,
Or ſhake the murdering ſavages away.
Rapacious, at the mother's throat they fly,
And tear the ſcreaming infant from her breaſt.
The godlike face of man avails him nought.
But if, apprized of the ſevere attack,
The country be ſhut up, lur'd by the ſcent,
On church-yards drear (inhuman to relate)
The diſappointed prowlers fall, and dig
The ſhrouded body from the grave; o'er which
Mix'd with foul ſhades, and frighted ghoſts,
they howl.

At this ſeaſon alſo hares, forgetting their natural timidity, enter the gardens to brouze on the cultivated vegetables, and leaving their tracks in the ſnow, are frequently hunted down or caught in ſnares.

Rabbits,

Rabbits, preſſed with hunger, enter into plantations, where they deſtroy multitudes of trees by barking them as high as they are able to reach.

The numerous tribes of birds alſo quit their retreats, congregate in large flocks, and in ſearch of food approach the habitations of man. Larks and various other ſmall birds betake themſelves for ſhelter to the warm ſtubble. Fieldfares, thruſhes, and blackbirds, neſtle together under hedges and ditch banks, and frequent the warm manured fields in the neighbourhood of towns. Sparrows, yellow-hammers, and chaffinches, crowd into the farm-yard, and attend the barn-doors to pick their ſcanty fare from the ſtraw and chaff. The tit-mouſe pulls ſtraws out of thatch, in ſearch of flies and other inſects which have ſheltered there. From wet meadows many birds, ſuch as redwings, fieldfares, ſky-larks, and tit-larks, procure much of their winter ſubſiſtence; the latter bird eſpecially wades up to its belly

belly in purſuit of the pupæ of inſects, and runs along upon the floating graſs and weeds. They meet alſo with many gnats on the ſnow near water. Graminivorous birds, ſuch as the ringdove, devour the tender tops of turnips and other vegetables; and the berries of the ivy afford a conſiderable ſupply: theſe do not appear to be at all affected by the moſt intenſe froſts, and in this reſpect are far ſuperior to the hips and haws that are frequently ſpoiled before the end of November. The redbreaſt ventures into the houſe,

> And pays to truſted man
> His annual viſit.

Snipes, woodcocks, herons, wild-ducks, and other water-fowl, are forced from the frozen marſhes, and obliged to ſeek their food about the rapid currents of ſtreams that are ſtill open. As the cold grows more intenſe, various kinds of ſea-birds quit the bleak open ſhores, and come up the rivers in ſearch of ſhelter and ſubſiſtence. The domeſtic cattle at this ſeaſon

require all the care and attention of the farmer. Sheep are often loſt in the ſudden ſtorms, by which the ſnow is drifted in the hollows ſo as to bury them a great depth beneath it; yet in this ſituation they have been known to ſurvive many days, paſſing the time probably in a ſtate of ſleep approaching to torpor, and thus requiring little or no food, and but a ſcanty ſupply of air; while the ſhelter of the ſurrounding ſnow, and the natural heat of their bodies, would keep them in a conſtant moderate temperature. Cows, with much ado, ſcratch up a few mouthfuls of graſs; but for their chief ſubſiſtence they muſt depend on the hay and other ſtores of the farm-yard. Early lambs and calves are kept within doors, and tended with as much care as the farmer's own children.

The plants at this ſeaſon are provided by nature with a ſort of winter-quarters, which ſecure them from the effects of cold. Thoſe called *herbaceous*, which die down

down to the root every autumn, are now ſafely concealed underground, preparing their new ſhoots to burſt forth when the earth is ſoftened in ſpring. Shrubs and trees which are expoſed to the open air, have all their ſoft and tender parts cloſely wrapt up in buds, which by their firmneſs reſiſt all the power of froſt; the larger kinds of buds, and thoſe which are almoſt ready to expand, are further guarded by a covering of reſin or gum, ſuch as the horſe-cheſnut, the ſycamore, and the lime. Their external covering, however, and the cloſeneſs of their internal texture, are of themſelves by no means adequate to reſiſt the intenſe cold of a winter's night: a bud *detached* from its ſtem, encloſed in glaſs, and thus protected from all acceſs of external air, if ſuſpended from a tree during a ſharp froſt, will be entirely penetrated and its parts deranged by the cold, while the buds on the ſame tree will not have ſuſtained the ſlighteſt injury; we

muſt therefore attribute to the *living principle* in vegetables as well as animals, the power of reſiſting cold to a very conſiderable degree: in animals, we know, this power is generated from the decompoſition of air by means of the lungs, and diſengagement of heat; how vegetables acquire this property remains for future obſervations to diſcover. If one of theſe buds be carefully opened, it is found to conſiſt of young leaves rolled together, within which are even all the bloſſoms in miniature that are afterwards to adorn the ſpring. The leaves of the woodbine appear juſt ready to expand by the end of the month: the winter aconite and bear's-foot are generally by this time in flower, and under the ſhelter of ſouthern hedge-banks, the red-dead-nettle, and groundſel. The flowers of the mezereon and ſnow-drop ſeem on the point of blowing, and the catkin or male bloſſom of the hazel begins to unfold. At the ſame time

alſo

alſo the ſhell-leſs ſnail makes its appearance *.

During the ſeverity of the froſt little work can be done out of doors by the farmer. As ſoon as it ſets in, he takes the opportunity of the hardneſs of the ground to draw manure to his fields. He lops and cuts timber, and mends thorn-hedges. When the roads become ſmooth from the frozen ſnow, he takes his team and carries hay and corn to market, or draws coals for himſelf and his neighbours. The barn reſounds with the flail, by the uſe of which the labourer is enabled to defy the cold weather. In towns the poor are pinched for fewel, and charity is peculiarly called for at this ſeaſon of the year. Many trades are at a ſtand during the ſeverity

* The ſhell-leſs ſnails, called ſlugs, are in motion all the winter in mild weather, and commit great depredations on garden plants and green wheat. The cauſe why theſe animals are ſo much better able to endure the cold, than ſhell ſnails, is that their bodies are protected by a covering of ſlime, as the whale is with blubber, which forbids the eſcape of their animal heat.

of the froſt; rivers and canals being frozen up, watermen and bargemen are out of employment. The harbours, however, in this iſland are never locked up by the ice, as they are in the more northern parts of Europe, and even on the oppoſite coaſt of Holland.

The amuſements of ſhooting, ſliding, ſkating, and other paſtimes, give life to this dreary ſeaſon; but our froſts are not continued and ſteady enough to afford us ſuch a ſhare of theſe diverſions as ſome other nations enjoy.

Where the Rhine
Branch'd out in many a long canal extends,
From every province ſwarming, void of care,
Batavia ruſhes forth; and as they ſweep,
On ſounding ſkates, a thouſand different ways,
In circling poiſe, ſwift as the winds, along,
The *then gay* land is maddened all to joy.
Nor leſs the northern courts, wide o'er the ſnow,
Pour a new pomp. Eager, on rapid ſleds,
Their vigorous youth in bold contention wheel
The long-reſounding courſe. Mean-time, to raiſe
The manly ſtrife, with highly blooming charms,
Fluſh'd by the ſeaſon, Scandinavia's dames,
Or Ruſſia's buxom daughters glow around.

THOMSON.

The

The great law of *congregation* during cold weather, which affects birds and ſeveral claſſes of quadrupeds, exerts its influence alſo on man. The Greenlanders and Samoiedes retire to their large underground habitations, each of which is occupied by five or ſix families; and in the more civilized parts of the north of Europe, plays, balls, viſitings, and ſocial amuſements of various kinds, contribute to raiſe the ſpirits and cheer the heart, in ſpite of the dead deſolate ſcenes which nature at every ſtep preſents to our view.

# FEBRUARY.

Now ſhifting gales with milder influence blow,
Cloud o'er the ſkies, and melt the falling ſnow;
The ſoften'd earth with fertile moiſture teems,
And, freed from icy bonds, down ruſh the ſwelling
ſtreams.

THE earlier part of this month may ſtill be reckoned winter, though the cold generally begins to abate. The days are now ſenſibly lengthened, and the ſun has power enough gradually to melt away the ice and ſnow. The hard weather generally breaks up with a ſudden thaw, attended by a ſouth wind and rain, which all at once diſſolves the ſnow. Torrents of water then pour from the hills, every brook is ſwelled into a large ſtream, which ruſhes violently into the rivers; the pavement of ice with which they are covered, now breaks up in every direction with the noiſe of thunder, and the floating maſſes daſhed againſt barges and bridges

bridges force down every thing that obſtructs their paſſage; the bed of the river becomes unable to carry off this vaſt accumulation of water; it ſwells over the banks, inundates the bordering fields, and ſweeps away cattle, mills, hay-ſtacks, gates, trees, and, in ſhort, almoſt every thing that it reaches; the manure is carried off from the fields, high banks with the trees upon them are undermined and give way, and in the ſpace of a few hours incalculable loſſes are ſuſtained.

Muttering, the winds at eve, with blunted point,
Blow hollow-bluſtering from the ſouth. Subdued
The froſt reſolves into a trickling thaw.
Spotted the mountains ſhine, looſe ſleet deſcends
And floods the country round. The rivers ſwell
Of bonds impatient. Sudden from the hills,
O'er rocks and woods, in broad brown cataracts,
A thouſand ſnow-fed torrents ruſh at once,
And where they ruſh, the wide reſounding plain
Is left one ſlimy waſte. THOMSON.

The froſt, however, uſually returns for a time, when freſh ſnow falls, often in great quantities, and thus the weather alternately changes during moſt part of this month.

Various ſigns of returning ſpring occur at different times in February. The wood-lark, one of our earlieſt and ſweeteſt ſongſters, often renews his note at the very entrance of the month; not long after, rooks begin to pair, and geeſe to lay. The thruſh and chaffinch then add to the early muſic of the groves; wood-owls hoot; near the cloſe of the month partridges begin to couple, and repair the ravages committed on this devoted race during the autumn and winter. Gnats play about, inſects ſwarm under ſunny hedges, and ſome of the earlieſt of the butterfly tribe make their appearance; for though by far the greater proportion of many ſpecies of inſects periſh at the cloſe of autumn, yet ſeveral individuals, probably thoſe that emerge the lateſt from the chryſalis ſtate, are only rendered torpid by the cold; and the moderate warmth of a bright winter's day is ſufficient to rouſe them into activity.

As ſoon as the earth is ſoftened, moles go to work in throwing up their hillocks.

Under ſome of the largeſt, a little below the ſurface of the ground, they make their neſts of moſs, in which four or five young are found at a time. Theſe animals feed on worms, beetles, and the roots of plants. They do much miſchief in gardens by looſening and devouring flower-roots, and in the fields by rendering the ſurface of the ſoil unequal by their hillocks, which obſtruct the ſcythe in mowing. They are alſo accuſed of piercing the ſides of dams and canals, and letting out the water; the ſtrong muſcles of their forefeet, together with their hand-like form, admirably fit this animal for ſwimming; and it has lately been obſerved, that in this way moles paſs from one iſland of the Hebrides to another.

Many plants emerge from underground in February, but few flowers as yet adorn the fields and paſtures. Snowdrops are ſometimes fully opened from the beginning of the month, often peeping out amidſt the ſnow.

Already now the ſnowdrop dares appear,
The firſt pale bloſſom of th' unripen'd year;
As Flora's breath by ſome transforming power,
Had chang'd an icicle into a flower.
Its name and hue the ſcentleſs plant retains,
And winter lingers in its icy veins.

MRS. BARBAULD.

The elder-tree diſcloſes its flower buds; the catkins of the hazel become very conſpicuous in the hedges; young leaves are budding on the gooſeberry and currant-trees about the end of the month; and thoſe cauſes are now in full activity which produce the ſpringing of plants and the renovation of vegetable life.

The firſt vital function in trees, after the froſt is moderated and the earth ſufficiently thawed, is the *aſcent of the ſap*, which is taken up by the abſorbent veſſels compoſing the *inner bark* of the tree, and reaching to the extremity of the fibres of the roots: the water thus imbibed by the roots is there mixed with a quantity of ſaccharine matter and formed into ſap, whence it is diſtributed in great abundance

abundance to every individual bud. The amazing quantity of ſweet liquid ſap provided for the nouriſhment of ſome trees, is evident from a prevalent cuſtom in this country, of *tapping* the birch in the early part of ſpring; thus obtaining from each tree a quart or more of liquor, according to its ſize, which is fermented into a ſpecies of wine: and a ſimilar cuſtom is obſerved in the northern parts of America with regard to the ſugar-maple, the juice of which boiled down yields a rich ſugar, each tree affording about two pounds. This great acceſſion of nouriſhment cauſes the bud to ſwell, to break through its covering, and to ſpread into bloſſoms, or lengthen into a ſhoot bearing leaves. This is the firſt proceſs, and, properly ſpeaking, is all that belongs to the *ſpringing* or *elongation* of trees; and in many plants, that is, all thoſe which are annual or deciduous, there is no other proceſs: the plant abſorbs juices from the earth, and in proportion to the quantity

of theſe juices increaſes in ſize; it expands its bloſſoms, perfects its fruit, and when the ground is incapable by drought or froſt of yielding any more moiſture, or when the veſſels of the plant are not able to draw it up, the plant periſhes. But in *trees*, though the beginning and end of the firſt proceſs is exactly ſimilar to what takes place in vegetables, yet there is a ſecond proceſs, which at the ſame time that it adds to their bulk, enables them to endure and go on increaſing through a long ſeries of years.

This ſecond proceſs begins ſoon after the firſt, in this way. At the baſe of the footſtalk of each leaf a ſmall bud is gradually formed; but the abſorbent veſſels of the leaf having exhauſted themſelves in the formation of the bud, are unable to bring it nearer to maturity: in this ſtate it exactly reſembles a ſeed, containing within it the rudiments of vegetation, but deſtitute of abſorbent veſſels to nouriſh and evolve the embryo. Being ſurrounded,

rounded, however, by ſap, like a ſeed in moiſt earth, it is in a proper ſituation for growing; the influence of the ſun ſets in motion the juices of the bud and of the ſeed, and the firſt operation in both of them is to ſend down roots a certain depth into the ground for the purpoſe of obtaining the neceſſary moiſture. The bud accordingly ſhoots down its roots upon the inner bark of the tree, till they reach the part covered by the earth. Winter now arriving, the cold and defect of moiſture, owing to the clogged condition of the abſorbent veſſels, cauſe the fruit and leaves to fall, ſo that, except the proviſion of buds with roots, the remainder of the tree, like an annual plant, is entirely dead: the leaves, the flowers, and fruit, are gone, and what was the inner bark is no longer organiſed, while the roots of the buds form a new inner bark; and thus the buds with their roots contain all that remains alive of the whole tree. It is owing to this annual renovation of the *inner bark*, that the

tree

tree increaſes in bulk; and, a new coating being added every year, we are hence furniſhed with an eaſy and exact method of aſcertaining the age of a tree by counting the number of concentric circles of which the trunk is compoſed. A tree, therefore, properly ſpeaking, is rather a congeries of a multitude of annual plants, than a perennial individual. The ſap in trees always riſes as ſoon as the froſt is abated, that when the ſtimulus of the warm weather in the early ſpring acts upon the bud, there ſhould be at hand a ſupply of food for its nouriſhment; and if by any means the ſap is prevented from aſcending at the proper time, the tree infallibly periſhes. Of this a remarkable inſtance occurred in London, during the ſpring ſucceeding the hard winter of the year 1794. The ſnow and ice collecting in the ſtreets ſo as to become very inconvenient, they were cleared, and many cart-loads were placed in the vacant quarters of *Moorfields*: ſeveral of theſe heaps of

ſnow

ſnow and frozen rubbiſh were piled round ſome of the elm-trees that grow there. At the return of ſpring, thoſe of the trees that were not ſurrounded with the ſnow expanded their leaves as uſual, while the others, being ſtill girt with a large frozen maſs, continued quite bare; for the fact was, the abſorbents in the lower part of the ſtem, and the earth in which the trees ſtood, were ſtill expoſed to a freezing cold. In ſome weeks, however, the ſnow was thawed, but the greater number of the trees were dead, and thoſe few that did produce any leaves were very ſickly, and continued in a languiſhing ſtate all ſummer, and then died.

Of all our native birds none begins to build ſo ſoon as the raven; by the latter end of this month it has generally laid its eggs and begun to ſit. The following anecdote illuſtrative of its attachment to its neſt, is related by Mr. White in his Natural Hiſtory of Selborne. "In the centre of this grove there ſtood an oak, which,

which, though ſhapely and tall on the whole, bulged out into a large excreſcence about the middle of the ſtem. On this a pair of ravens had fixed their reſidence for ſuch a ſeries of years that the oak was diſtinguiſhed by the name of *the raven-tree*. Many were the attempts of the neighbouring youths to get at this eyry; the difficulty whetted their inclinations, and each was ambitious of ſurmounting the arduous taſk. But when they arrived at the ſwelling, it jutted out ſo much in their way, and was ſo far beyond their graſp, that the moſt daring lads were awed, and acknowledged the undertaking to be too hazardous. So the ravens built on, neſt upon neſt, in perfect ſecurity, till the fatal day arrived in which the wood was to be levelled. It was in the month of *February* when thoſe birds uſually ſit. The ſaw was applied to the butt, the wedges were inſerted into the opening, the woods echoed to the heavy blows of the beetle and mallet, the tree nodded to its

its fall, but ſtill the dam ſat on. At laſt, when it gave way, the bird was flung from her neſt; and though her parental affection deſerved a better fate, was whipped down by the twigs, which brought her dead to the ground."

The farmer is impatient to begin his work in the fields, as ſoon as the ground is ſufficiently thawed. He plows up his fallows, ſows beans and peas, rye and ſpring wheat; ſets early potatoes; drains wet lands; dreſſes and repairs hedges; lops trees, and plants thoſe kinds that love a wet ſoil; ſuch as poplars, alders, and willows.

# MARCH.

Winter ſtill ling'ring on the verge of Spring,
Retires reluctant, and from time to time
Looks back, while at his keen and chilling breath,
Fair Flora ſickens.

THE principal operations of nature during this month ſeem to be to dry up the ſuperabundant moiſture of February, thereby preventing the roots and ſeeds from rotting in the wet earth, and gradually to bring on the proceſs of vegetation in the ſwelling buds, though at the ſame time ſevere chilling blaſts and the variableneſs in the weather prevent them from a full diſcloſure of their tender contents. This effect is beautifully touched upon in a ſimile of Shakeſpear's.

" And, like the tyrannous breathings of the north,
" Checks all our buds from blowing."

This ſeeming tyranny, however, is to be regarded as productive of very important

portant advantages; and thoſe years generally prove moſt fruitful in which the pleaſing appearances of ſpring are the lateſt; for the more advanced the ſeaſon, the leſs probability is there of blights and inſects, which are the moſt formidable of all enemies to ſpringing vegetables.

The ſun has now acquired ſo much power, that on a clear day we often feel all the genial influence of ſpring, though the naked ſhrubs and trees give the proſpect the comfortleſs appearance of winter. But ſoft pleaſant weather in March is not often of long duration.

As yet the trembling year is unconfirm'd,
And winter oft at eve reſumes the breeze;
Chills the pale morn, and bids his driving ſleets
Deform the day, delightleſs. THOMSON.

As ſoon as a few dry days have made the land fit for working, the farmer goes to the plow; and, if the fair weather continues, proceeds to ſow barley and oats, though this buſineſs is ſeldom finiſhed till the next month. The importance of a dry

dry ſeaſon for getting the ſeed early and favourably into the ground is expreſſed in the old proverb,

A buſhel of March duſt is worth a king's ranſom.

The mellow note of the throſtle, who ſits perched on the naked bough of ſome lofty tree, is heard from the beginning of the month, and at the ſame time the ringdove cooes in the woods; pheaſants crow; hens ſit; ducks and geeſe lay; and the rookery is now all in motion with the pleaſing labour of building and repairing neſts. It is highly amuſing to obſerve the tricks and artifices of this thieviſh tribe in defending or plundering the materials of their new habitations. A ſociety with ſuch a licenſe of theft one would imagine could not poſſibly ſubſiſt; and that they are ſometimes obliged to interpoſe the public will, to control the private diſpoſitions of individuals, is ſhown in the following ſtory. There was once in a rookery a pair of birds, who, in the building time, inſtead of going out in ſearch

of

of materials, kept at home, and, watching the opportunity, plundered every unguarded neſt; thus building their own habitation by contributions levied upon the induſtry of their neighbours. This had continued ſome time, and the robbers had hitherto eſcaped with impunity: their neſt was juſt finiſhed, when the reſt of the ſociety, by common conſent, made an attack on the depredators, beat them ſoundly, demoliſhed their neſt, and expelled them ignominiouſly from the rookery.

Theſe birds are accuſed by the farmer of doing much injury by plucking up the young corn, and other ſpringing vegetables; though of late it ſeems to have become a general opinion that this miſchief is fully repaid by their diligence in picking up the grubs of various inſects, which, if allowed to grow to maturity, would occaſion much greater damage. For this purpoſe they are ſeen frequently following the plow, and darkening with their numbers

bers the newly turned up land; in which occupation, near the ſea-coaſt, they are frequently joined by multitudes of gulls; and as theſe birds at other times confine themſelves almoſt wholly to the ſhore, it would probably be worth the farmer's while, where he has an opportunity, to encourage them in preference to the former.

Some birds that took refuge in our temperate climate from the rigour of the arctic winters, now begin to leave us, and return to the countries where they were bred; the redwing-thruſh, fieldfare, and woodcock, are of this kind, and they retire to ſpend their ſummer in Norway, Sweden, and other northern regions. The reaſon why theſe birds quit the north of Europe in winter is evidently to eſcape the ſeverity of the froſt; but why at the approach of ſpring they ſhould return to their former haunts, is not ſo eaſily accounted for. It cannot be want of food, for if during the *winter* in this country they

they are able to ſubſiſt, they may fare plentifully through the reſt of the year; neither can their migration be cauſed by an impatience of warmth, for the ſeaſon when they quit this country is by no means ſo hot as the Lapland ſummers; and in fact, from a few ſtragglers or wounded birds annually breeding here, it is evident that there is nothing in our climate or ſoil which ſhould hinder them from making this country their permanent reſidence, as the thruſh, blackbird, and others of their congeners, actually do. The crane, the ſtork, and other birds which uſed formerly to be natives of our iſland, have quitted it as cultivation and population have extended; it is probable, alſo, that the ſame reaſon forbids the fieldfare and redwing-thruſh, which are of a timorous retired diſpoſition, to make choice of England as a place of ſufficient ſecurity to breed in.

The gannets, or Soland geeſe, reſort during this month to thoſe Scotch iſles,

where they breed in ſuch numbers as to cover almoſt the whole ſurface of the ground with their eggs and young. The Baſs, an inſulated rock in the Firth of Forth, is one of their moſt favourite haunts; of which place Dr. Harvey, in his *Exercitations on the Generation of Animals*, has given a very animated picture. The following is a literal tranſlation of the original Latin. "There is a ſmall iſland, called by the Scotch *the Baſs*, not more than a mile in circumference; its ſurface is almoſt entirely covered during the months of May and June with neſts, eggs, and young birds, ſo that it is difficult to ſet a foot without treading on them: while the flocks of birds flying round are ſo prodigious that they darken the air like a cloud; and their voice and clamour is ſo great, that perſons can ſcarcely hear one another ſpeak. If from the ſummit of the precipice you look down on the ſubjacent ocean, you ſee it on every ſide covered with infinite numbers

bers of birds of different kinds ſwimming and hunting their prey. If you ſail round the iſland, and ſurvey the impending cliffs, you behold in every fiſſure and receſs of the craggy rocks innumerable ranks of birds of various kinds and ſizes, ſurpaſſing in multitude the ſtars in a ſerene ſky. If you view from a diſtance the flocks flying to and from the iſland, you may imagine them a vaſt ſwarm of bees."

Infinite wings! till all the plume-dark air,
And rude reſounding ſhore are one wild cry.
THOMSON.

Frogs, which during winter lay in a torpid ſtate at the bottom of ponds or ditches, are enlivened by the warmth of ſpring, and early in this month riſe to the ſurface of the water in vaſt numbers. They are at firſt very timorous, and dive to the bottom with great quickneſs as any one approaches; but in the coupling ſeaſon they become bolder, and make themſelves heard to a great diſtance by their

croaking. A ſhort time after their firſt appearance they begin to ſpawn, each female depoſits a maſs of tranſparent jelly-like globes with a black ſpeck in the middle; in this laſt are contained the rudiments of the future tadpole, while the tranſparent covering ſerves both for the defence and food of the embryo. In a few days the round ſpeck becomes ſomewhat elongated, at the ſame time increaſing in ſize, till, at the end of about three weeks or a month, the little animal breaks through its covering, and truſts itſelf to the ſhalloweſt and warmeſt part of the pond or ditch where it happened to be depoſited: as the ſummer advances it increaſes in ſize, the fore-legs begin to ſhoot out, and ſhortly after the hind ones, the body becomes more lengthened, the tail falls off, the length of the inteſtines is conſiderably ſhortened, and from an *aquatic graminivorous* animal it is changed into a minute frog, *amphibious* and feeding upon *inſects and other animal food.* When

this laſt transformation is perfected, the neceſſity of emigration ſeizes upon the whole brood, the water is deſerted, and they make their appearance on the land ſo ſuddenly, and in ſuch amazing numbers, that they have been ſuppoſed to deſcend from the clouds. So prone have men in all ages been to have recourſe to wonders, by way of ſaving themſelves the trouble of minute inveſtigation and the uſe of their ſenſes!

The bat now makes its appearance; and about this time alſo the viper uncoils itſelf from its winter ſleep. This is the only venomous reptile that our country affords, and happily it is by no means common. They are found principally in rocky warm thickets and in unfrequented heaths in ſearch of their favourite food, the various ſpecies of field-mice; very ſeldom intruding, as the common ſnake, into the gardens and hedge-banks. In ſome of the ſmall uninhabited iſlands of the Hebrides they ſwarm to a great de-

gree. The poiſon of theſe animals is ſecreted in a ſmall gland under each eye, from which paſſes a duct terminating in a ſharp perforated canine tooth, capable of being erected or depreſſed at pleaſure. When the viper wiſhes to inflict a wound, it erects its canine teeth, and darting forwards, ſtrikes them into the ſkin, at the ſame time ſqueezing a drop of poiſon through the aperture in the tooth; the wound ſoon after grows very hot and painful, ſwells extremely, and occaſionally proves fatal, or at leaſt takes away the uſe of the injured part, unleſs a proper remedy is ſpeedily applied. That which is in common uſe, and which has ſcarcely ever been known to fail, is *olive or ſallad-oil*; a quantity of which rubbed upon the wound, and alſo taken internally, is a certain remedy: on which account the viper-catchers have always a bottle of oil with them in caſe of need.

Thoſe moſt elegant fiſh, ſmelts or ſparlings, begin to run up the rivers in this month

month in order to ſpawn. They are of ſo tender a nature, that the leaſt mixture of ſnow-water in the river drives them back again into the ſea.

But nothing in the animal creation is a more pleaſing ſpectacle than the ſporting of the young lambs, moſt of which are yeaned this month, and are truſted abroad when the weather is tolerably mild. Dyer, in his poem of the Fleece, gives a very natural and beautiful deſcription of this circumſtance,

Spread around thy tend'reſt diligence
In flow'ry ſpring-time, when the new dropt lamb,
Tott'ring with weakneſs by his mother's ſide,
Feels the freſh world about him; and each thorn,
Hillock, or furrow, trips his feeble feet:
O guard his meek ſweet innocence from all
Th' innumerous ills, that ruſh around his life;
Mark the quick kite, with beak and talons prone,
Circling the ſkies to ſnatch him from the plain;
Obſerve the lurking crows; beware the brake,
There the ſly fox the careleſs minute waits;
Nor truſt thy neighbour's dog, nor earth, nor ſky:
Thy boſom to a thouſand cares divide.
Eurus oft flings his hail; the tardy fields

Pay not their promis'd food; and oft the dam
O'er her weak twins with empty udder mourns,
Or fails to guard, when the bold bird of prey
Alights, and hops in many turns around,
And tires her alſo turning: to her aid
Be nimble, and the weakeſt, in thine arms,
Gently convey to the warm cote, and oft,
Between the lark's note and the nightingale's,
His hungry bleating ſtill with tepid milk;
In this ſoft office may thy children join,
And charitable habits learn in ſport:
Nor yield him to himſelf, ere vernal airs
Sprinkle thy little croft with daiſy flowers.

Another agreeable token of the arrival of the ſpring is, that the bees begin to venture out of their hives about the middle of this month: as their food is the honey-like juice found in the tubes of flowers, their coming abroad is a certain ſign that flowers are now to be met with. No creature ſeems poſſeſſed of a greater power of foreſeeing the weather, ſo that their appearance in a morning may be reckoned a ſure token of a fair day.

Several ſpecies of bees are natives of Great Britain, ſome of which lay up ho-

ney,

ney, while others do not; ſome of which are gregarious, or live in large ſocieties, and others are ſolitary. But that ſpecies which is commonly meant by the generic term *bee*, is the one that is at preſent domeſticated, lays up honey, and dwells in numerous communities. Theſe little animals, in a wild ſtate, form their neſts in the hollow of ſome tree, or the cleft of a rock; in which ſituation they were frequently ſeen and deſcribed by the old Greek and Latin poets. Homer, particularly in the very firſt ſimile of the Iliad, gives the following animated picture of them.

As from ſome *rocky cleft* the ſhepherd ſees
Cluſt'ring in heaps on heaps the driving bees
Rolling, and black'ning, ſwarms ſucceeding ſwarms
With deeper murmurs and more hoarſe alarms;
Duſky they ſpread a cloſe embodied crowd,
And o'er the vale deſcends the living cloud.

POPE'S HOMER.

The poet Virgil, who has appropriated a whole book in his Georgics to the ſubject of bees, has there repeated in moſt

beautiful language as much of the polity and natural hiſtory of this inſect as was known to the ancients. Since the time, however, in which he wrote, many errors have been detected, and many new circumſtances have been added, by the zeal and attention of modern obſervers.

Early in the ſpring, each hive contains one queen or female, from 200 to 1000 drones or males, and from 15000 to 18000 labourers or mules; the firſt and laſt kind alone have ſtings, the males being entirely unarmed. As ſoon as the plants begin to flower, the inhabitants of the hive put themſelves in motion; the greater part of the labourers take wing, and diſperſe themſelves through the neighbourhood in ſearch of honey and wax; the former of which is a ſweet limpid juice found in the nectaries of flowers, and the latter is made by the bees from the duſt contained within the anthers of bloſſoms. Theſe different materials are brought to the hive, and the labourers

labourers in waiting take the wax, and form of it thoſe little hexagonal cells which ſerve as ſtore houſes for the honey, or neſts for their young; the honey is partly diſtributed for preſent food to the inhabitants, and the remainder laid up againſt winter. While the labourers are thus engaged, the queen begins to depoſit her eggs to the number of about 200 each day in the empty cells: the egg being ſoon hatched into a little white grub, increaſes the employment of the labourers, to whom is allotted the taſk of feeding it with the pureſt honey: when it has attained its full ſize, the mouth of its habitation is cloſed up with wax, it becomes a chryſalis, and in a few days breaks through its waxen covering, being changed into a perfect bee, and inſtantly quits the hive in ſearch of honey for the public ſtore. This rapid acceſſion, however, of inhabitants ſoon begins to crowd the hive, and commonly in the months of May and July large emigrations take place, called

ſwarms, which ſettling in an empty hive (or in their wild ſtate in a hollow tree or rock), in a few days lay the waxen foundations of their ſtate, and begin collecting honey for their winter ſupply. Each ſwarm conſiſts of a ſingle female, 1000 or more males, and from 24,000 to 28,000 labourers. Thus they live in perfect harmony with each other, and daily adding to their numbers and ſtores; till ſome time in the month of September, the particular time varying in different hives, the whole ſtate becomes all uproar and confuſion, a loud angry humming is heard, accompanied by a general maſſacre and expulſion of the drones: every male is deſtroyed or turned out to periſh; the young grubs that would have changed into drones participate in the ruin, and in the whole interval from September to March, only a few hundred males are allowed to arrive at maturity.

The gardens are now rendered gay by the crocuſes, which adorn the borders with

with a rich mixture of the brighteſt yellow and purple. The little ſhrubs of mezereon are in their beauty. The fields look green with the ſpringing graſs, but few wild flowers as yet appear to decorate the ground. Daiſies, however, begin to be ſprinkled over the dry paſtures; and the moiſt banks of ditches are enlivened with the gloſſy ſtar-like yellow flowers of pilewort. Towards the end of the month, primroſes peep out beneath the hedges; and the moſt delightfully fragrant of all flowers, the violet, diſcovers itſelf by the perfume it imparts to the ſurrounding air, before the eye has perceived it in its lowly bed. SHAKESPEARE compares an exquiſitely ſweet ſtrain of muſic, to the delicious ſcent of this flower.

O! it came o'er my ear, like the ſweet ſouth,
That breathes upon a bank of violets,
Stealing and giving odour.

There are ſeveral kinds of violets; but the fragrant (both blue and white) is the earlieſt,

earlieſt, thence called the *March violet*. To theſe flowers SHAKESPEARE adds the daffodil,

Which comes before the ſwallow dares, and takes
The winds of March with beauty.

Beſides the hazel, the ſallow now enlivens the hedges with its catkins full of yellow duſt; and the alder-trees are covered with a kind of black bunches, which are the male and female flowers. The leaves of honeyſuckles are nearly expanded. In the gardens, the peach and nectarine, the almond, the cherry and apricot-trees, come into full bud during this month. The gardeners find plenty of employment in pruning trees, digging and manuring beds, and ſowing a great variety of ſeeds, both for the flower and kitchen garden.

In the latter part of this month the *equinox* happens, when day and night are of equal length all over the globe: or rather, when the ſun is an equal time

above, and below, the horizon. For the morning and evening twilight make apparent day conſiderably longer than night. This takes place again in September. The firſt is called the *vernal*, the latter, the *autumnal* equinox. At theſe times ſtorms and tempeſts are particularly frequent, whence they have always been the terror of mariners. March winds are boiſterous and vehement to a proverb.

# APRIL.

Now daiſies pied, and violets blue,
And lady-ſmocks all ſilver white,
And cuckow-buds of yellow hue,
Do paint the meadows with delight;
The cuckow now on every tree
Sings cuckoo—cuckoo.

THE diſtinguiſhing characteriſtic of the weather during this month is fickleneſs; the moſt lovely ſunſhiny days are ſucceeded by others, which by the force of contraſt often ſeem the moſt unpleaſant of any in the year; the bright green of the freſh leaves, and the delightful view of newly opened flowers, is too frequently obſcured by clouds and chilled by rough wintry blaſts.

The moſt perfect image of ſpring, however, is exhibited in this month; no production is yet come to maturity, and the

the viciſſitudes of warm gleams and gentle ſhowers have the moſt powerful effect in haſtening that univerſal ſpringing of the vegetable tribes, whence the ſeaſon derives its appellation.

April generally begins with raw unpleaſant weather, the influence of the equinoctial ſtorms in ſome degree ſtill prevailing. Its opening is thus deſcribed in a poem of Mr. Warton's,

Mindful of diſaſter paſt,
And ſhrinking at the northern blaſt,
The ſleety ſtorm returning ſtill,
The morning hoar, the evening chill;
Reluctant comes the timid Spring;
Scarce a bee, with airy ring,
Murmurs the bloſſom'd boughs around
That clothe the garden's ſouthern bound:
Scarce a ſickly ſtraggling flower
Decks the rough caſtle's rifted tower:
Scarce the hardy primroſe peeps
From the dark dell's entangled ſteeps.
- - - - - - - - - - - - - - - - - - - -
Fringing the foreſt's devious edge
Half rob'd appears the hawthorn hedge;
Or to the diſtant eye diſplays
Weakly green its budding ſprays.

Early

Early in the month, that welcome gueſt and harbinger of ſummer, the ſwallow, returns. Of this genus of birds there are four ſpecies that viſit our iſland, all of which are known by the ſhortneſs of their legs, the extent of their wings, and the eaſe and ſwiftneſs of their flight, by which they eſcape the attacks of the kite and ſparrow-hawk that commit ſuch havock among the other ſmall birds. The kind firſt ſeen is the chimney ſwallow, remarkable by its long forked tail and red breaſt, and by a twittering note, on account of which it might perhaps, with no great impropriety, be called a ſinging bird; it makes its neſt in chimneys. At firſt, here and there, only one appears, glancing by as if ſcarcely able to endure the cold.

> The ſwallow for a moment ſeen,
> Skims in haſte the village green.

But in a few days their number is greatly increaſed, and they ſport with much ſeeming pleaſure in the warm ſunſhine. The

ſecond

ſecond in the order of arrival is the houſe martin, which conſtructs its neſt of clay under the eaves of houſes and in the corners of windows: this is the moſt numerous ſpecies, and is known by its white breaſt and black back. The next ſpecies is the ſand-martin; this is the ſmalleſt of the genus, being called in Spain *mountain butterflies:* their favourite reſidence is in a ſteep ſandbank above a large pool or river, in which they ſcoop out holes to the depth of about two feet, and in this ſecure retreat depoſit their eggs. The largeſt ſpecies, and that which arrives the lateſt, is the ſwift, known by its lofty and remarkably rapid flight: theſe are ſeen in fine mornings ſporting about and diſplaying their various evolutions at a vaſt height in the air; and in the evening the males collect together in parties of ten or a dozen, approach nearer the ground, and hurry round the tops of large buildings, uttering at the ſame time a piercing ſcream by way of ſerenade to their mates,

who

who make their neſts under the tiles of houſes.

As theſe birds live on inſects, their appearance is a certain proof that many of this minute claſs of animals are now got abroad from their winter retreats.

Another pleaſing occurrence in this month is the pairing of birds, their aſſiduity in building neſts, and the various melody with which the groves are filled.

Every copſe
Deep-tangled, tree irregular, and buſh
Bending with dewy moiſture, o'er the heads
Of the coy quiriſters that lodge within,
Are prodigal of harmony. THOMSON.

The nightingale, that moſt enchanting of ſongſters, is heard ſoon after the arrival of the ſwallow.

Firſt heard before the ſhallow cuckoo's bill.
MILTON.

He ſings by day as well as by night, but in the day-time his voice is drowned in the multitude of performers; on which account

account the poets have always made the ſong of the nightingale a nocturnal ſerenade.

Sweet bird, that ſhun'ſt the noiſe of folly,
Moſt muſical, moſt melancholy!
Thee, chauntreſs, oft, the woods among
I woo to hear thy even ſong. MILTON.

The ſinging of birds is uſually ſuppoſed to be the language of courtſhip: "all this waſte of muſic is the voice of love," ſays Thomſon: but though for the moſt part it is coincident with the pairing and hatching of birds, yet there are ſeveral circumſtances which ſhow it to be rather the effect of a particular ſtate of the body, depending conſiderably on the weather, and in a great meaſure inſtinctive, that is, *involuntary*, than the conſequence of the ſentiment of love or deſire. If a bird be made prematurely to moult, he will be in ſong while the reſt are out of ſong. A ſolitary nightingale, or any other bird kept in a cage, will not only ſing in that ſituation, but will continue his note ſeveral

ral weeks longer than one that is in a ſtate of nature, as well as being much earlier: and ſeveral birds even when at liberty, as the redbreaſt, blackbird, and thruſh, recommence their ſong in autumn, as the woodbine and ſome other plants bloſſom again at that time of the year; the ſcent indeed of the flowers is fainter, in this reſpect correſponding with the birds juſt mentioned, whoſe notes are leſs ſprightly, and with longer intervals of ſilence, than in ſpring. The reaſon of the vernal ſinging of birds being ſuperior to the autumnal, is probably owing to greater vigour of body at one time than the other. During the winter, if birds have but little to eat, yet they have nothing to do except providing themſelves with food; and the increaſed ſtimulus of the weather in ſpring, together with the plenty of *animal* food that they then feed upon, ſuch as worms, grubs of inſects, &c. gives them ſtrength and ſpirits for ſinging and propagating. But in autumn the

caſe

caſe is widely different; the weather itſelf indeed may be as favourable to encourage the ſinging of birds as in the ſpring, though perhaps the languor and decreaſe of ſtrength may be greater from the ſummer heats, than the ſeverity of winter; the fatigue, however, of bringing up a brood of young, the illneſs during the moulting ſeaſon, and the change in food, from worms to *ſeeds* and other *vegetable* productions, afford a ſufficient and obvious reaſon why the ſinging of birds ſhould be only partially renewed in autumn.

In April ducks and geeſe hatch. The young ones are covered with a yellow down, and take to the water inſtantly on leaving the ſhell, where they afford a pleaſing ſight as they ſail under convoy of their dams.

Another of the moſt ſtriking events of this month is the renewal of the cuckoo's note, which is generally heard about the middle of April. The ſimple monotonous call, whence its name is derived, has commanded attention in all countries; and

and ſeveral ruſtic ſayings, and the names of ſeveral plants which flower at this time are derived from it; as the *cuckoo-flower*, or ladyſmock, the *cuckoo-pint*, or arum: and in Attica, the arrival of this bird being at the time when the fruit of the fig-tree (for which the territory of Athens was celebrated) made its appearance, the cuckoo and a young fig were called by the ſame name, (κοκκυξ) coccux.

Hail beauteous ſtranger of the wood,
Attendant on the Spring!
Now heaven repairs thy rural ſeat,
And woods thy welcome ſing.

Soon as the daiſy decks the green,
Thy certain voice we hear:
Haſt thou a ſtar to guide thy path,
Or mark the rolling year?

Delightful viſitant! with thee
I hail the time of flowers,
When heaven is fill'd with muſic ſweet
Of birds among the bowers.

The ſchoolboy, wand'ring in the wood
To pull the flowers ſo gay,
Starts, thy curious voice to hear,
And imitates thy lay. LOGAN.

It

It is upon this coincidence between the arrival of birds and the flowering of plants that *natural calendars* have been attempted to be conſtructed. It would indeed be returning to the earlieſt ages of ignorance and barbariſm were we to make uſe of ſuch a calendar, however perfect in its kind, in civil tranſactions, as we are in poſſeſſion of unvarying modes of calculating the lapſe of time by the aſſiſtance of aſtronomy; but the very circumſtance that unfits a *natural calendar* for civil uſe, renders it of conſiderable importance to the farmer and gardener, whoſe buſineſs is ſo materially affected by the irregular viciſſitudes of the ſeaſons. For example, the time of ſheep-ſhearing, it is evident, cannot be fixed to any particular week, much leſs to any certain day; for this operation cannot be performed ſafely, till warm weather is thoroughly eſtabliſhed; it would be abſurd, therefore, to fix the ſecond week in June for this buſineſs, ſince the latter end of

May in very favourable years, and the cloſe of June in unfavourable ones, might, according to circumſtances, be the moſt proper time: a certain degree of warmth is neceſſary to the bloſſoming of the elder-tree, and as the ſeaſon is early or late, ſo will be the time of this plant's flowering; and as an equal degree of heat is requiſite before ſheep ought to be ſheared, according to the ſeaſon of elder-bloſſoms will vary the time of ſheep-ſhearing.

The cuckoo's arrival is regularly preceded ſome days by that of the wry-neck, a ſmall bird ſingular in its attitudes and plumage, and living on ants and inſects that harbour in the bark of trees, which it extracts by means of its long tongue, furniſhed with a ſharp bony tip. This bird has alſo a peculiar note or cry, eaſily diſtinguiſhed by thoſe who have once heard it.

The other ſummer birds of paſſage that arrive during this month uſually make their

their appearance in the following order: the ring-ouzle, redſtart, yellow-wren, ſwift, whitethroat, graſshopper-lark, and willow-wren. Various kinds of inſects are ſeen about this time, of which the moſt remarkable is the *gryllus*, *gryllo-talpa*, or *mole-cricket*. This ſingular animal is diſtinguiſhed by its low, dull, jarring note, continued for a long time without intermiſſion like the chattering of the fern-owl; but ſtill more ſo by the peculiar ſtructure of its fore-feet, which are exceedingly ſtrong and greatly reſemble thoſe of the mole, whence this inſect derives its name. Anatomiſts alſo have diſcovered ſo great a conformity between its internal ſtructure, and that of the ruminating quadrupeds, as renders it highly probable that this animal, like them, *chews the cud*.

The mole-cricket inhabits the ſides of canals and ſwampy wet ſoils, in which, juſt below the ſurface, it forms long winding burrows, and a chamber neatly

ſmoothed and rounded of the ſize of a moderate ſnuff-box, in which, about the middle of May, it depoſits its eggs to the number of nearly an hundred. The ridges, which they raiſe in their ſubterraneous progreſs, interrupt the evenneſs of gravel walks, and the havock they commit in beds of young cabbages, legumes, and flowers, renders them very unwelcome gueſts in a garden.

Several ſpecies of that elegant tribe of inſects the *libellula*, or dragon-fly, about this time emerge from the water, in which they paſs their *aurelia* ſtate.

The *formica herculanea*, or horſe-ant, in the beginning of this month, recommences its annual labours; this ſpecies is about three times the ſize of the common black ant, and inhabits the pine foreſts of Scotland, and the rocky woods of England and Wales, in which it erects a large conical neſt, two feet or more in height, compoſed of leaves and ſmall twigs.

The ſnake too, the large bat, and ſhell-ſnails, quit their winter retirements at this period; and on mild evenings earth-worms come out of their holes in ſearch of food, or for the purpoſe of propagation.

Fiſh, actuated by the ſame law that exerts its influence upon the reſt of nature, now leave the deep holes and ſheltered bottoms where they paſſed the winter, and wandering about in ſearch of food, again offer themſelves to the angler.

Beneath a willow, long forſook,
The fiſher ſeeks his cuſtom'd nook;
And burſting thro' the crackling ſedge
That crowns the current's cavern'd edge,
He ſtartles from the bordering wood
The baſhful wild-duck's early brood.

WARTON.

Many trees come into bloſſom during this month, and form a moſt agreeable ſpectacle, as well on account of their beauty, as the promiſe they give of future benefits. The blackthorn or ſloe leads the way, and is ſucceeded by the

apricot, peach, nectarine, cherry, and plum: but though

Hope waits upon the flowery prime,

yet it is an anxious time for the poſſeſſor, as the faireſt proſpect of a plentiful increaſe is often blighted by the frequent returns of froſty winds.

Abortive as the firſt-born bloom of ſpring
Nipp'd by the lagging rear of winter's froſt.
MILTON.

Cowper deſcribes the ſame circumſtance in the following lines:

Spring is but the child
Of churliſh Winter, in her froward moods
Diſcovering much the temper of her ſire.
For oft, as if in her the ſtream of mild
Maternal nature had revers'd its courſe,
She brings her infants forth with many ſmiles,
But once deliver'd, kills them with a frown.
TASK III.

Thoſe of the earlier plants that now moſt ſtrike the eye, are the primroſe and woodſorrel under hedges; the wood anemone in dry woods and thickets; the

wood

wood crowfoot and marſh marygold in wet marſhy places; and the ladyſmock or cuckoo-flower in meadows.

The farmer is ſtill buſied in ſowing different ſorts of grain and ſeeds for fodder, for which purpoſe dry weather is yet ſuitable; though plentiful ſhowers at due intervals are deſirable for feeding the young graſs and ſpringing corn.

# MAY.

Born in yon blaze of orient ſky,
Sweet May! thy radiant form unfold;
Uncloſe thy blue voluptuous eye,
And wave thy ſhadowy locks of gold.

For thee the fragrant zephyrs blow,
For thee deſcends the ſunny ſhower;
The rills in ſofter murmurs flow,
And brighter bloſſoms gem the bower.

Light Graces dreſs'd in flowery wreaths,
And tiptoe joys their hands combine;
And Love his ſweet contagion breaths,
And laughing dances round thy ſhrine.

Warm with new life, the glittering throngs,
On quivering fin and ruſtling wing,
Delighted join their votive ſongs,
And hail thee goddeſs of the ſpring.

DARWIN.

MAY has ever been the favourite month in the year for poetical deſcription, but the praiſes originally laviſhed upon it were uttered in climates more

ſouthern

ſouthern than our own. In ſuch it really unites all the ſoft beauties of ſpring with the radiance of ſummer, and poſſeſſes warmth enough to cheer and invigorate, without overpowering. With us, eſpecially ſince we have reckoned by the new ſtyle, great part of the month is yet too chill for a perfect enjoyment of the charms of nature, and frequent injury is ſuſtained by the flowers and young fruits during its courſe, from blights and blaſting winds. May-day, though ſtill obſerved as a rural feſtival, has often little pleaſure to beſtow except that ariſing from the name, while the ſcanty garlands compoſed in honour of the day, rather diſplay the immature infancy than the luxuriant youth of the year. In a very elegant poem, entitled, *The Tears of Old May Day*, this newer rival is thus deſcribed,

Nor wonder, man, that Nature's baſhful face,
And opening charms her rude embraces fear:
Is ſhe not ſprung of April's wayward race,
The fickly daughter of th' unripen'd year?

With ſhow'rs and ſunſhine in her fickle eyes,
With hollow ſmiles proclaiming treach'rous peace;
With bluſhes, harb'ring in their thin diſguiſe,
The blaſt that riots on the Spring's increaſe.

The latter part of the month, however, on the whole, is even in this country ſufficiently profuſe of beauties. The earth is covered with the freſheſt green of the graſs and young corn, and adorned with numerous flowers opening on every ſide. The trees put on all their verdure; the hedges are rich in fragrance from the ſnowy bloſſoms of the hawthorn; and the orchards diſplay their higheſt beauty in the delicate bloom of the apple bloſſoms.

One boundleſs bluſh, one white-empurpled ſhower
Of mingled bloſſoms. THOMSON.

All theſe promiſing ſigns of future plenty are, however, liable to be cut off by the blights which peculiarly occur in this month, and frequently commit moſt dreadful ravages. The hiſtory and cauſe of

of blights is by no means exactly aſcertained, and it is a ſubject which, from its actual importance, well deſerves a minute inveſtigation. There appear to be three kinds of blights: the firſt occurs in the early ſpring, about the time of the bloſſoming of the peach, and is nothing more than a *dry froſty wind* uſually from the north or north-eaſt, and principally affects the *bloſſoms*, cauſing them to fall off prematurely, and conſequently to become unproductive. The two other kinds of blights occur in this month, affecting principally the apple and pear-trees, and ſometimes the corn. One of theſe conſiſts in the appearance of an immenſe multitude of *aphides*, a kind of ſmall inſect of a brown, or black, or green colour, attacking the *leaves* of plants, and entirely encruſting the young ſtems. Theſe peſts are, I believe, always found to make their appearance after a north-eaſt wind; and it has been ſuppoſed by many that they are actually conveyed hither by the wind.

For oft, engend'red by the hazy north,
Myriads on myriads, inſect armies warp
Keen in the poiſon'd breeze; and waſteful eat
Thro' buds and bark, into the blacken'd core
Their eager way. THOMSON.

Many circumſtances indeed favour this opinion, as the ſuddenneſs with which they appear, being generally in the courſe of a ſingle night; and thoſe trees that are ſheltered from the wind being uninfected: indeed it frequently happens that a ſingle branch that chances to be ſkreened, will eſcape unhurt, while the reſt of the tree is quite covered with theſe minute deſtroyers. A third reaſon may be derived from the inactivity of theſe inſects: they generally remain almoſt immoveable on the branch or leaf where they are firſt ſeen, and are for the moſt part unprovided with wings; yet the places where they are commonly found are thoſe parts of a tree which are furtheſt from the ground, and moſt expoſed to the wind. The laſt kind of blight is preceded by a

ſouth

ſouth or ſouth-weſt wind, unaccompanied by inſects; the effects of which are viſible in the burnt appearance of all leaves and ſhoots that are expoſed to that quarter; it attacks all vegetables indiſcriminately, but thoſe ſuffer moſt from it which are the loftieſt, and whoſe leaves are the youngeſt; the oak therefore is peculiarly injured.

A cold and windy May is, however, accounted favourable to the corn; which, if brought forward by early warm weather, is apt to run into ſtalk, while its ears remain thin and light.

The leafing of trees is commonly completed in this month. It begins with the aquatic kinds, ſuch as the willow, poplar, and alder, proceeds to the lime, ſycamore, and horſecheſtnut, and concludes with the oak, beech, aſh, walnut, and mulberry; theſe laſt, however, are ſeldom in full leaf till June.

No tree in all the grove but has its charms,
Tho' each its hue peculiar; paler ſome

And

And of a wanniſh grey; the willow ſuch
And poplar, that with ſilver lines his leaf,
And aſh, far ſtretching his umbrageous arm.
Of deeper green the elm; and deeper ſtill
Lord of the woods, the long ſurviving oak.
Some gloſſy-leav'd and ſhining in the ſun,
The maple, and the beech of oily nuts
Prolific, and the lime at dewy eve
Diffuſing odours: nor unnoted paſs
The ſycamore, capricious in attire,
Now green, now tawny, and ere autumn yet
Have chang'd the woods, in ſcarlet honours bright.

COWPER'S TASK.

Among the numerous wild-flowers, none attracts more notice than the cowſlip,

Whoſe baſhful flowers
Declining, hide their beauty from the ſun,
Nor give their ſpotted boſoms to the gaze
Of haſty paſſenger.

On hedge-banks the wild germander of a fine azure blue is conſpicuous, and the whole ſurface of meadows is often covered by the yellow crowfoot. Theſe flowers, alſo called buttercups, are erroneouſly ſuppoſed to communicate to the

the butter at this ſeaſon its rich yellow tinge, as the cows will not touch it on account of its acrid biting quality; this is ſtrikingly viſible in paſtures, where, though all the graſs is cropt to the very roots, the numerous tufts of this weed ſpring up, flower, and ſhed their ſeeds in perfect ſecurity and the moſt abſolute freedom from moleſtation by the cattle; they are indeed cut down and made into hay together with the reſt of that rubbiſh that uſually occupies a large proportion of every meadow; and in this ſtate are eaten by cattle, partly becauſe they are incapable of ſeparating them, and partly becauſe by drying their acrimony is conſiderably ſubdued; but there can be no doubt of their place being much better ſupplied by any ſort of real graſs. In the preſent age of agricultural improvement the ſubject of graſs lands among others has been a good deal attended to, but much yet remains to be done, and the tracts of the ingenious Stillingfleet,

and

and of Mr. Curtis on this important diviſion of rural oeconomy, are well deſerving the notice of every liberal farmer. The excellence of a meadow conſiſts in its producing as much herbage as poſſible, and that this herbage ſhould be agreeable and nutritious to the animals which are fed with its crop. Every plant of crowfoot therefore ought, if practicable, to be extirpated, for, ſo far from being grateful and nouriſhing to any kind of cattle, it is notorious, that in its freſh ſtate nothing will touch it. The ſame may be ſaid of the hemlock, kex, and other umbelliferous plants which are common in moſt fields, and which have entirely overrun others; for, theſe when freſh, are not only noxious to the animals that are fed upon hay, but from their rank and ſtraggling manner of growth, occupy a very large proportion of the ground. Many other plants that are commonly found in meadows may upon the ſame principles be objected to,

and

and though the preſent generation of farmers has done much, yet ſtill more remains for their ſucceſſors to perform.

The gardens now yield an agreeable though immature product in the young gooſeberries and currants, which are highly acceptable to our tables, now almoſt exhauſted of their ſtore of preſerved fruits.

Early in the month the lateſt ſpecies of the ſummer birds of paſſage arrive, generally in the following order: fern-owl or goat-ſucker, fly-catcher, and ſedge-bird.

This is alſo the principal time in which birds hatch and rear their young. The aſſiduity and patience of the female during the taſk of ſitting is admirable, as well as the conjugal affection of the male, who ſings to his mate, and often ſupplies her place; and nothing can exceed the parental tenderneſs of both when the young are brought to light.

Several

Several ſpecies of inſects are this month added to thoſe which have already been enumerated; the chief of which are the great white cabbage butterfly (papilio braſſicæ), the may-chaffer, the favourite food of the fern-owl; the horſe fly, or foreſt fly, ſo great a plague to horſes and cattle, and ſeveral kinds of moths and butterflies.

Towards the end of May the bee-hives ſend forth their earlier ſwarms. Theſe colonies conſiſt of the young progeny and ſome old ones, now grown too numerous to remain in their preſent habitation, and ſufficiently ſtrong and vigorous to provide for themſelves. One queen bee is neceſſary to form each colony; and wherever ſhe flies they follow. Nature directs them to march in a body in queſt of a new ſettlement, which, if left to their choice, would generally be ſome hollow trunk of a tree. But man, who converts the labours and inſtincts of ſo many animals to his own

uſe,

uſe, provides them with a dwelling and repays himſelf with their honey. The early ſwarms are generally the moſt valuable, as they have time enough to lay in a plentiful ſtore of honey for their ſubſiſtence through the winter.

About the ſame time the glow-worm ſhines. Of this ſpecies of inſects the females are without wings and luminous, the males are furniſhed with wings, but are not luminous; it is probable therefore that this light may ſerve to direct the male to the haunts of the female, as Hero of Seſtos is ſaid to have diſplayed a torch from the top of a high tower to guide her venturous lover Leander in his dangerous paſſage acroſs the Helleſpont.

You (i. e. the Sylphs)
Warm on her moſſy couch the radiant worm,
Guard from cold dews her love illumined form,
From leaf to leaf conduct the virgin light,
Star of the earth, and diamond of the night.

DARWIN.

Theſe little animals are found to extinguiſh their lamps between eleven and twelve at night.

Old May-day is the uſual time for turning out cattle into the paſtures, though frequently then very bare of graſs. The milk ſoon becomes more copious, and of finer quality, from the juices of the young graſs; and it is in this month that the making of cheeſe is uſually begun in the dairies. Cheſhire, Wiltſhire, and the low parts of Glouceſterſhire, are the tracts in England moſt celebrated for the beſt cheeſe.

Many trees and ſhrubs flower in May, ſuch as the oak, beech, maple, ſycamore, barberry, laburnum, horſe-cheſtnut, lilac, mountain aſh, and Guelder roſe; of the more humble plants the moſt remarkable are the lily of the valley, and woodroofe in woods, the male orchis in meadows, and the lychnis, or cuckoo flower, on hedge-banks.

This

This month is not a very buſy ſeaſon for the farmer. Some ſowing remains to be done in late years; and in forward ones, the weeds, which ſpring up abundantly in fields and gardens, require to be kept under. The huſbandman now looks forwards with anxious hope to the reward of his induſtry.

Be gracious, Heaven! for now laborious man
Has done his part. Ye foſtering breezes, blow!
Ye ſoftening dews, ye tender ſhowers, deſcend!
And temper all, thou world-reviving ſun,
Into the perfect year! THOMSON.

# JUNE.

Now genial ſuns and gentle breezes reign,
And Summer's faireſt ſplendours deck the plain;
Exulting Flora views her new-born roſe,
And all the ground with ſhort-lived beauty glows.

JUNE is really in this climate what the poets repreſent May to be, the moſt lovely month in the year. Summer is commenced, and warm weather thoroughly eſtabliſhed; yet the heats rarely ariſe to exceſs, or interrupt the enjoyment of thoſe pleaſures which the ſcenes of nature at this time afford. The trees are in their fulleſt dreſs, and a profuſion of the gayeſt flowers is every where ſcattered around, which put on all their beauty juſt before they are cut down by the ſcythe, or withered by the heat.

Soft copious ſhowers are extremely welcome towards the beginning of this month, to forward the growth of the young

young herbage. Such a one is thus deſcribed by Thomſon.

Gradual ſinks the breeze
Into a perfect calm; that not a breath
Is heard to quiver through the cloſing woods,
Or ruſtling turn the many-twinkling leaves
Of aſpen tall.

At laſt
The clouds conſign their treaſures to the fields;
And, ſoftly ſhaking on the dimpled pool
Preluſive drops, let all their moiſture flow,
In large effuſion, o'er the freſhened world.
The ſtealing ſhower is ſcarce to patter heard,
By ſuch as wander through the foreſt walks,
Beneath th' umbrageous multitude of leaves.
But who can hold the ſhade, while Heaven deſcends
In univerſal bounty, ſhedding herbs,
And fruits, and flowers, on Nature's ample lap?

One of the earlieſt rural employments of this month is the ſhearing of ſheep; a buſineſs of much importance in various parts of this kingdom, where wool being the baſis of the principal manufactures, is one of the moſt valuable products that the country affords. England has been for many ages famous for its breeds of ſheep, which yield wool of various qualities,

ties, ſuited to different branches of the manufacture. The downs of Dorſetſhire and other ſouthern and weſtern counties feed ſheep, whoſe fine ſhort fleeces are employed in making the beſt broad cloths. The coarſer wool of Yorkſhire and the northern counties is uſed in the narrow cloths. The large Leiceſterſhire and Lincolnſhire ſheep are clothed with long thick flakes, proper for the hoſier's uſe; and every other kind is applied to ſome valuable purpoſe.

The ſeaſon for ſheep-ſhearing commences as ſoon as the warm weather is ſo far ſettled that the ſheep may without danger lay aſide great part of their clothing. The following tokens are laid down by Dyer in his Fleece to mark out the proper time.

If verdant elder ſpreads
Her ſilver flowers; if humble daiſies yield
To yellow crowfoot and luxuriant graſs,
Gay ſhearing-time approaches.

Before ſhearing the ſheep undergo the operation of waſhing, in order to free the

the wool from the foulneſs which it has contracted.

Of a clear river, gently drive the flock,
And plunge them one by one into the flood:
Plung'd in the flood, not long the ſtruggler ſinks,
With his white flakes, that gliſten thro' the tide;
The ſturdy ruſtic, in the middle wave,
Awaits to ſeize him riſing; one arm bears
His lifted head above the limpid ſtream
While the full clammy fleece the other laves
Around, laborious, with repeated toil;
And then reſigns him to the ſunny bank,
Where, bleating loud, he ſhakes his dripping locks.

DYER.

The ſhearing itſelf is conducted with a degree of ceremony and rural dignity, being a feſtival, as well as a piece of labour.

At laſt, of ſnowy white, the gathered flocks
Are in the wattled pen innumerous preſs'd,
Head above head: and, rang'd in luſty rows
The ſhepherds ſit, and whet the ſounding ſhears.
The houſewife waits to roll her fleecy ſtores,
With all her gay-dreſt maids attending round.
One, chief, in gracious dignity enthron'd,
Shines o'er the reſt, the paſtoral queen, and rays
Her ſmiles, ſweet-beaming, on her ſhepherd-king.

A ſimple ſcene! yet hence BRITANNIA ſees
Her ſolid grandeur riſe: hence ſhe commands
Th' exalted ſtores of every brighter clime,
The treaſures of the ſun without his rage.

THOMSON.

A profuſion of fragrance now ariſes from the fields of clover in bloſſom. Of this plant there are the varieties of white and purple; the latter of which is ſometimes called honeyſuckle, from the quantity of ſweet juice contained in the tube of the flower, whence the bees extract much honey. A ſtill more exquiſite odour proceeds from the beans in bloſſom, of which Thomſon ſpeaks in this rapturous language:

Long let us walk
Where the breeze blows from yon extended field
Of bloſſom'd beans. Arabia cannot boaſt
A fuller gale of joy, than, liberal, thence
Breathes thro' the ſenſe, and takes the raviſh'd ſoul.

Beans and peas, which now adorn the fields with their purple flowers, belong

to a large natural family of plants called the *papilionaceous*, or butterfly-ſhaped-bloſſomed, and alſo *leguminous* from the pods which they bear. Moſt of theſe in our climate afford food for man or beaſt: of ſome the ſeeds alone are uſed, as of pea and bean; of others the entire pod, as of French or kidney bean; and of ſome the whole plant, as of clover, lucern, and vetch.

Our hedges are now beginning to be in their higheſt beauty and fragrance. The place of the hawthorn is ſupplied by the flowers of the *hip* or *dog-roſe*, the different hues of which, from a light bluſh to a deep crimſon, form a moſt elegant variety of colour. The *bitterſweet nightſhade* with its fine purple petals, and bright orange ſtamina, merits the ſecond rank in beauty to the roſe. The *woodbine* or *honeyſuckle* is unequalled in fragrance, and as an ornamental plant, almoſt rivals the nightſhade; while the graceful climbing ſhoots of the *white bryony* and tufted

vetch connect by light feſtoons the other vegetable beauties that grace peculiarly the hedges of this country.

The ſeveral kinds of corn come into ear and flower during this month, as well as moſt of the numerous ſpecies of graſs, which indeed are all ſo many leſſer kinds of corn; or rather corn is only a larger ſort of graſs. It is peculiar to all this kind of plants to have long ſlender pointed leaves, a jointed ſtalk, and a flowering head either in the form of a cloſe ſpike like wheat, or a looſe bunch called a panicle, like oats. This head conſiſts of numerous huſky flowers, each of which bears a ſingle ſeed. The bamboo, ſugar-cane, and reed, are the largeſt of this natural family.

Thoſe kinds whoſe ſeeds are big enough to be worth the labour of ſeparating, are uſually termed *corn*, and form the chief article of food of almoſt all the nations of the world, for very few are ſo little civilized as not to raiſe it. In Europe the

princ pal

principal kinds of corn are wheat, rye, barley, and oats. In Aſia the chief dependance is placed on rice; in Africa and America on maize or Indian corn.

The ſmaller kinds, called graſſes, are moſt valuable for their leaves, and ſtalks or herbage, which make the principal food of domeſtic cattle. This cut down and dried is *hay*, the winter proviſion of cattle in all the temperate and northern regions. Graſs is moſt fit to cut after it is in ear, but before its ſeeds are ripened. If it be ſuffered to grow too long, it will loſe its juices and become like the ſtraw of corn. The latter part of June is the beginning of hay-harveſt for the ſouthern and middle parts of the kingdom. This is one of the buſieſt and moſt agreeable of rural occupations; both ſexes, and all ages, are engaged in it; the fragrance of the new mown graſs, the gaiety of all ſurrounding objects, and the genial warmth of the weather, all conſpire to render it a ſeaſon of delight and pleaſure to the beholder.

Now ſwarms the village o'er the jovial mead;
The ruſtic youth brown with meridian toil,
Healthful and ſtrong; full as the ſummer-roſe
Blown by prevailing ſuns, the village maid,
Half naked, ſwelling on the ſight, and all
Her kindled graces burning o'er her cheek.
Even ſtooping age is here; and infant hands
Trail the long rake, or, with the fragrant load
O'ercharg'd, amid the kind oppreſſion roll.
Wide flies the tedded grain; all in a row
Advancing broad, or wheeling round the field,
They ſpread the breathing harveſt to the ſun:
Or as they rake the green-appearing ground,
And drive the duſky wave along the mead,
The ruſſet hay-cock riſes thick behind,
In order gay. THOMSON.

The increaſing warmth of the year calls forth freſh ſpecies of inſects. Of thoſe which appear during this month, the chief are the graſshopper; braſs or green beetle; various kinds of flies; ephemera or angler's may-fly; cicada ſpumaria, cuckoo-ſpit inſect, or frog-hopper; ſtag-horn beetle, one of the largeſt of this claſs; and the formidable gadfly, a ſingle one of which ſtrikes terror into the largeſt herd of cattle,

tle, for it is in the ſkin of the back of theſe animals that this inſect depoſits its eggs.

The principal ſeaſon for taking that delicate fiſh, the mackerel, is in this month.

About this time alſo birds ceaſe their notes; for after the end of June an attentive obſerver heard no birds except the ſtone curlew (thick-kneed plover of Pennant) whiſtling late at night; the yellow-hammer, goldfinch, and golden-creſted wren, now and then chirping. The cuckoo's note alſo ceaſes about this time.

The groves, the fields, the meadows, now no more
With melody reſound. 'Tis ſilence all,
As if the lovely ſongſters, overwhelm'd
By bounteous nature's plenty, lay intranc'd
In drowſy lethargy.

Some of the moſt obſervable plants in flower are the vine; the wood-ſpurge, and wood-pimpernel, the one in dry, the other in moiſt thickets; buckbean, water iris,

and willow-herbs, in marſhes; meadow craneſbill, vipers-bugloſs, and corn poppy, in fields; mullein, foxglove, thiſtles, and mallow, by road-ſides and in ditch-banks; and that ſingular plant the *bee-orchis*, in chalky or limeſtone ſoils.

Gooſeberries, currants, and ſtrawberries, begin to ripen in this month, and prove extremely refreſhing as the parching heats advance. About an hour before ſunſet, in the mild evenings of this month, it is highly amuſing to watch the common white or barn owl in ſearch of its prey, which conſiſts almoſt wholly of field-mice. The large quantity of ſoft plumage with which this bird is covered, enables it to glance eaſily, and without noiſe, through the air. Its manner of hunting is very regular, firſt beating up the ſide of a hedge, then taking a few turns over the meadow, and finiſhing by the oppoſite hedge, every now and then dropping among the graſs in order to ſeize its food. It has been found by careful

ful obſervation, that when a pair of owls have young, a mouſe is brought to the neſt about once in every five minutes.

Another intereſting nocturnal bird is the goat-ſucker, or fern-owl, nearly allied to the *ſwallow* genus in its form, its mode of flight, and food: it is by no means common, but may be occaſionally obſerved hawking among the branches of large oaks in purſuit of the ſcarabeus ſolſtitialis, or fern-chaffer, which is its favourite food.

The balmy evenings, about the middle of this month, offer yet another intereſting object to the naturaliſt; this is the angler's may-fly (ephemera vulgata), the moſt ſhort-lived in its perfect ſtate of any of the inſect race; it emerges from the water, where it paſſes its aurelia ſtate, about ſix in the evening, and dies about eleven at night. They uſually begin to appear about the fourth of June, and continue in ſucceſſion nearly a fortnight.

On the twenty-firſt of June happens the *ſummer-ſolſtice*, or longeſt day: at this time in the moſt northern parts of the iſland there is ſcarcely any night, the twilight continuing almoſt from the ſetting to the riſing of the ſun; ſo that it is light enough at midnight to ſee to read. This ſeaſon is alſo properly called *Midſummer*, though, indeed, the greateſt heats are not yet arrived, and there is more warm weather after it than before.

# JULY.

Deep to the root
Of vegetation parch'd, the cleaving fields
And ſlipp'ry lawn an arid hue diſcloſe;
Echo no more returns the cheerful ſound
Of ſharp'ning ſcythe; the mower ſinking heaps
O'er him the humid day, with flowers perfum'd.

As January is the coldeſt, ſo July is the hotteſt month of the year. For though the direct influence of the ſun is continually diminiſhing after the ſummer ſolſtice, yet the earth and air have been ſo thoroughly heated, that the warmth which they retain, more than compenſates for a time the diminution of the ſolar rays. The effects of this increaſed temperature ſoon become very ſtriking. The flowers of the former month quickly mature their ſeeds, ſhrivel and fall; at the ſame time their leaves and ſtalks loſe their verdure, and the whole plant haſtens to decay. A new generation advances to ſupply their

place, of plants which require the full influence of our ſummer ſuns to bring them to perfection, and which flouriſh moſt luxuriantly in ſituations and ſeaſons when the warmth is moſt abundant: theſe are, particularly, many of the umbelliferous, as wild carrot and hemlock; the aromatic, as wild thyme; the ſucculent, or thickleaved, as the whole race of ſedums and cotyledons; the aquatic and marſh plants, as bulruſh, waterlily, marſh St. John's wort, ſundew, and Lancaſhire aſphodel; and the compound flowered, as thiſtle, ſowthiſtle, hawkweed, bluebottle (centaurea cyanus), marygold, goldenrod, camomile, and ſunflower.

The animal creation ſeem oppreſſed with languor during this hot ſeaſon, and either ſeek the receſſes of woods, or reſort to pools and ſtreams to cool their bodies and quench their thirſt.

On the graſſy bank
Some ruminating lie; while others ſtand
Half in the flood, and often bending ſip
The circling ſurface. In the middle droops

The

The ſtrong laborious ox, of honeſt front,
Which incompos'd he ſhakes; and from his ſides
The troublous inſects laſhes with his tail,
Returning ſtill.

THOMSON.

The inſect tribe, however, are peculiarly active and vigorous in the hotteſt weather. Theſe minute creatures are for the moſt part annual, being hatched in the ſpring and dying at the approach of winter. They have, therefore, no time to loſe in indolence, but muſt make the moſt of their ſhort exiſtence; eſpecially as their moſt perfect ſtate bears only a ſmall proportion to the reſt of their lives. All inſects that live upon, or in the ground, undergo three changes, in each of which they are transformed to a totally different appearance. From the egg they firſt turn into *caterpillars*, or *maggots*, when they crawl upon many feet, and are extremely voracious, ſeveral kinds of them doing much miſchief in gardens, ſtripping the trees of their leaves, and ſometimes devouring

devouring the herbage on the ground. This is their ſtate in the ſpring. They next become *aurelias*, or *chryſaliſes*, reſembling an infant cloſely wrapt in ſwaddling clothes, being motionleſs, requiring no nouriſhment, and indeed having ſcarcely any appearance of life. From this ſtate they burſt forth into the *perfect inſect*, ſhining in all its colours, furniſhed with wings, endowed with ſurpriſing activity, capable of propagating its ſpecies, and feeding for the moſt part on thin animal juices, or the honey of flowers. In this ſtate they continue but a ſhort time. The male impregnates the female, ſhe lays her eggs, and they both die. Thoſe inſects that have paſſed all their former life in water, as gnats, ephemeras, &c. no ſooner undergo the laſt transformation than they become incapable of continuing in the water even for a few ſeconds.

Wak'd by his warmer ray, the reptile young
Come wing'd abroad; by the light air upborn,
Lighter,

Lighter, and full of ſoul. From every chink,
And ſecret corner, where they ſlept away
The wintry ſtorms; or riſing from their tombs,
To higher life; by myriads, forth at once,
Swarming they pour; of all the varied hues
Their beauty-beaming parent can diſcloſe.
Ten thouſand forms! ten thouſand different tribes!
People the blaze. To ſunny waters ſome
By fatal inſtinct fly; where on the pool
They, ſportive, wheel; or, ſailing down the ſtream,
Are ſnatch'd immediate by the quick ey'd trout,
Or darting ſalmon. Thro' the green-wood glade
Some love to ſtray; there lodg'd, amus'd and fed,
In the freſh leaf. Luxurious, others make
The meads their choice, and viſit every flower,
And every latent herb: for the ſweet taſk,
To propagate their kinds, and where to wrap,
In what ſoft beds, their young yet undiſclos'd,
Employs their tender care. Some to the houſe,
The fold, and dairy, hungry, bend their flight;
Sip round the pail, or taſte the curdling cheeſe.

THOMSON.

The luxury of cooling ſhades is now peculiarly grateful; and, indeed, is ſcarcely deſired in this climate longer than a few weeks at the height of ſummer.

Welcome,

Welcome, ye ſhades! ye bowery thickets, hail!
Ye lofty pines! ye venerable oaks!
Ye aſhes wild, reſounding o'er the ſteep!
Delicious is your ſhelter to the ſoul,
As to the hunted hart the ſallying ſpring.

THOMSON.

Bathing, too, is a delightful amuſement at this ſeaſon; and happy is the ſwimmer, who alone is able to enjoy the full pleaſure of this healthful exerciſe. The power of habit to improve the natural faculties, is in nothing more apparent than in the art of ſwimming. Man, without practice, is utterly unable to ſupport himſelf in the water. In theſe northern countries, the ſeaſon for pleaſant bathing being ſhort, few in proportion can ſwim at all; and to thoſe who have acquired the art, it is a laborious and fatiguing exerciſe. Whereas, in the tropical countries, where from their very infancy both ſexes are continually plunging into the water, they become a ſort of amphibious creatures, ſwimming and diving with the utmoſt

eaſe,

eaſe, and for hours together, without intermiſſion.

The exceſſive heats of this period of the year cauſe ſuch an evaporation from the ſurface of the earth and waters, that after ſome continuance of dry weather, large heavy clouds are formed, which, at length, let fall their collected liquor in extremely copious ſhowers, which frequently beat down the full-grown corn, and ſometimes deluge the country with ſudden floods. Thunder and lightning generally accompany theſe ſummer ſtorms. Lightning is a collection of electric fire drawn from the heated air and earth, and accumulated in the clouds, which, at length overcharged, ſuddenly let go their contents in the form of broad flaſhes or fiery darts. Theſe are attracted again by the earth, and often intercepted by buildings, trees, and other elevated objects, which are ſhattered by the ſhock. Thunder is the noiſe occaſioned by the exploſion, and therefore always *follows* the lightning;

lightning; the ſound travelling ſlower to our ears, than the light to our eyes. Juſt the ſame thing happens when a gun is fired at a diſtance. When we hear the thunder, therefore, all danger from that flaſh of lightning is over; and thunder, though ſo awful and tremendous to the ear, is, of itſelf, entirely harmleſs.

The plants which flower this month, beſide thoſe already mentioned, are the potatoe and hop; the meadow-ſweet and graſpoly (lythrum ſalicaria) by the ſide of ſtreams and ponds; the pimpernel, cockle, and fumitory in corn fields; the delicate blue campanula in waſtes or by road ſides; and the naſturtium, jaſmine, and white lily in gardens. The pure white flowers of the latter, elevated upon their tall ſtalk, give an agreeable ſenſation of coolneſs to the eye.

The effects of the great heat on the human body are allayed by the various wholeſome fruits which this ſeaſon offers. Thoſe which are now ripe are of all others the moſt cooling and refreſhing; as currants,

rants, gooſeberries, raſpberries, ſtrawberries, and cherries. Theſe are no leſs ſalutary and uſeful, than the richeſt productions of the warmer climates.

That agreeable article of luxury the muſhroom, about this time alſo appears above ground; and numbers of that migratory fiſh, the pilchard, are taken off the coaſt of Cornwall.

During this month young frogs migrate from the breeding ponds, and betake themſelves to the ſhelter of the long graſs. The hoary beetle (ſcarabeus ſolſtitialis) now makes its appearance; it much reſembles the common dor, or cockchaffer, and is chiefly diſtinguiſhed by not exceeding half the ſize of this laſt. The preſent is alſo the ſeaſon when bees expel and kill the drones; and at this time too the flying ants quit their neſts, and diſperſe to found new colonies.

As the ant is the animal which has paſſed into a proverb for its ſuppoſed frugality, foreſight, and induſtry, it will be amuſing

to

to correct in a few words the erroneous opinions that have been entertained concerning it, by giving a ſhort ſketch of its manners and habits.

Ants, like bees and moſt other inſects that dwell in large communities, are divided into male, female, and neuter. Of theſe, the neuters or labourers are without wings, the males and females have wings, and are diſtinguiſhed from each other by the ſuperior ſize of the females. Their dwelling is called an *ant-hill*, which is generally ſituated at the foot of a tree, under a wall, or in any place ſufficiently expoſed to the ſun and ſheltered from the cold. In the hill are three or four paſſages that lead obliquely down, a foot or more, to a large vaulted chamber; the centre of which is the habitation and place of general aſſembly for the old ones, while the eggs and young worms are ranged in orderly lines between the centre and ſides.

If

If one of theſe chambers be opened in the winter, it will be found to contain ſome eggs and a conſiderable number of labourers alone, in a ſtate of torpor. As the ſpring advances, the ants reſume their labours, the eggs hatch, and going through the uſual proceſs diſcloſe a conſiderable proportion of labourers and a few males and females; the young females ſoon begin to depoſit their eggs, and the hill ſwarms with inhabitants. About the latter end of July the males and females either emigrate, or are expelled by the labourers; the males wander about for a time and ſoon die, but the impregnated females immediately ſet about ſcooping holes in the ground in which they depoſit their eggs, and thus each becomes the mother of a new colony: two or three hundred of the eggs are uſually converted into labourers before winter: at the approach of cold weather the mother dies, the remainder become torpid till the ſucceeding ſpring, when they recommence

their work. The ſtock of eggs is hatched into labourers, males and females; and the population of the colony rapidly increaſes during the ſummer. They lay up no proviſions, not even for a ſingle day; and during boiſterous rainy weather are therefore obliged to be contented with a very ſcanty ſhare of food. They prey upon almoſt every animal or vegetable ſubſtance, particularly beetles, caterpillars, dead mice, rats, or frogs, honey, the ſaccharine juices that exude from the leaves of trees, and fruits of every kind. They are ſometimes ſucceſsfully employed in clearing trees of caterpillars, by ſmearing the trunk for a few inches with tar or any other adheſive matter, and then turning a number of ants looſe on the branches; for their eſcape being prevented by the girdle of tar, they are under the neceſſity of continuing in the tree, and having no other food, will in a ſhort time devour or expel all the caterpillars. When one ant, or a few, meet with a larger quantity of proviſion than

than they are able to convey to the neſt, they return and inform their comrades, who ſally forth in a large body to carry off the prize. In America, and on the African coaſt, there occaſionally happens an irruption of ſuch infinite multitudes as to be an object of ſerious alarm, even to the human inhabitants; of one of theſe incurſions the following quotation is a curious account.

"During my ſtay," ſays Smith, "at Cape-coaſt Caſtle, a body of theſe ants came to pay us a viſit in our fortification. It was about day-break when the advanced guard of this famiſhed crew entered the chapel, where ſome negro ſervants were aſleep on the floor. The men were quickly alarmed at the invaſion of this unexpected army, and prepared as well as they could for a defence. While the foremoſt battalion of inſects had already taken poſſeſſion of the place, the rear guard was more than a quarter of a mile diſtant; the whole ground ſeemed alive,

alive, and crawling with unceaſing deſtruction. After deliberating a few moments on what was to be done, it was reſolved to lay a large train of gunpowder along the path they had taken; by this means millions were blown to pieces, and the rear guard perceiving the deſtruction of their leaders, thought proper inſtantly to return, and make back to their original habitation."

Poultry moult during this month; and young partridges are found among the corn.

The firſt broods of ſwallows and martins now begin to congregate, and before they come to their full ſtrength and command of wing, ſuffer ſeverely from the attacks of hawks and other birds of prey.

The farmer's chief employment in July, is getting home the various products of the earth. It is the principal hay-month in the northern parts of England, and the work-people ſuffer much fatigue from the exceſſive heat to which they are expoſed.

Flax

Flax and hemp are pulled in this month. Theſe plants are cultivated in various parts of Europe, more than in England. The ſtalks of both are full of tough fibres or ſtrings, which, ſeparated and prepared in a particular manner, become fit for ſpinning into thread. Of flax linen is made, from the fineſt cambric, to the coarſeſt canvaſs. Hemp is chiefly uſed for coarſe cloth, ſuch as ſtrong ſheeting, and ſacking; but it is ſometimes wrought to conſiderable fineneſs; it is alſo twiſted into ropes and cables.

The corn-harveſt begins in July in the ſouthern parts of the iſland; but Auguſt is the principal harveſt-month for the whole kingdom.

# AUGUST.

Fair Plenty now begins her golden reign,
The yellow fields thick-wave with ripened grain;
Joyous the ſwains renew their ſultry toils,
And bear in triumph home the harveſt's wealthy ſpoils.

THE commencement of this month is ſtill hot, and uſually calm and fair; and thoſe vegetable productions that yet require the powerful influence of the ſun are daily advancing to maturity. The farmer beholds the chief object of his culture, and the principal ſource of his riches, waiting only for the hand of the gatherer. Of the various kinds of grain, rye and oats are uſually the firſt ripened; this, however, varies with the time of ſowing, and ſome of every ſpecies may be ſeen at once fit for cutting.

Every fair day is now of great importance, ſince, when the corn is once ripe, it is liable to continual damage while ſtanding,

ſtanding, either from the ſhedding of the ſeeds, the depredations of birds, or ſudden ſtorms. The utmoſt diligence is therefore uſed by the careful huſbandman to get it ſafely houſed, and labourers are hired from all quarters to haſten the work.

Pour'd from the villages, a numerous train
Now ſpreads o'er all the fields In form'd array
The reapers move, nor ſhrink for heat or toil,
By emulation urg'd. Others diſpers'd
Or bind in ſheaves, or load or guide the wain
That tinkles as it paſſes. Far behind,
Old age and infancy with careful hand
Pick up each ſtraggling ear.

This intereſting ſcene is beheld in full perfection only in the open-field countries, where the ſight can at once take in an uninterrupted extent of land waving with corn, and a multitude of people engaged in the various parts of the labour. There is no proſpect more generally pleaſing than this, and which affords a more ſtriking example of the effect of

aſſociated ſentiments, in converting into a moſt delightful view that which, in itſelf conſidered, is certainly far inferior in variety and beauty to what is daily paſſed by with indifference or even diſguſt.

The gathering in of the harveſt is a ſcene that addreſſes itſelf not ſo much to the eye as the heart, and the emotions that it gives birth to are not ſo much thoſe of delight and ſurpriſe, as the ſatisfactory termination of anxiety, and, in conſequence, benevolence to man and gratitude to the Being who fills our ſtores with plenty, and our minds with gladneſs.

Be not too narrow, huſbandmen! but fling
From the full ſheaf, with charitable ſtealth,
The liberal handful. Think, oh! grateful, think,
How good the God of harveſt is to you,
Who pours abundance o'er your flowing fields.

THOMSON.

In a late ſeaſon, or where favourable opportunities of getting in the harveſt have been neglected, the corn often ſuffers

fers greatly from heavy ſtorms of wind and rain. It is beaten down to the ground, the ſeeds are ſhed or rotted by moiſture; or if the weather continues warm, the corn *grows*, that is, the ſeeds begin to germinate and put out ſhoots. Grain in this ſtate is ſweet and moiſt; it ſoon ſpoils on keeping; and bread made from it is clammy and unwholeſome.

Harveſt concludes with the field-peas and beans, which are ſuffered to become quite dry and hard before they are cut down. The blackneſs of the bean-pods and ſtalks is diſagreeable to the eye, though the crop is valuable to the farmer. In England they are uſed as food for cattle only, as the nouriſhment they afford, though ſtrong, is groſs and heavy; but in moſt of the other European countries they contribute largely to the ſuſtenance of the lower claſſes.

The rural feſtival of *harveſt-home* is an extremely natural one, and has been obſerved in almoſt all ages and countries.

What can more gladden the heart than to ſee the long-expected products of the year, which have been the cauſe of ſo much anxiety, now ſafely houſed and beyond the reach of injury?

Inwardly ſmiling, the proud farmer views
The riſing pyramids that grace his yard,
And counts his large increaſe; his barns are ſtor'd
And groaning ſtaddles bend beneath their load.
SOMERVILLE.

The poor labourer, too, who has toiled in ſecuring another's wealth, juſtly expects to partake of the happineſs. The jovial harveſt-ſupper cheers his heart, and induces him to begin, without murmuring, the preparations for a future harveſt.

Hops, which are much cultivated in ſome parts of England, afford their valuable produce generally in this month. The hop is a climbing plant, ſometimes growing wild in hedges, and cultivated on account of its uſe in the making of malt liquors. Having large long roots, they flouriſh

flouriſh beſt in a deep and rich ſoil; and are ſet in ſmall hills at regular diſtances from each other, about five plants, and three long poles for them to run upon, being placed in each hill. They appear above ground early in the ſpring, and as they grow faſt, have generally by the latter end of June, or the beginning of July, reached the top of the poles, which are from ſixteen to twenty feet long, after which they puſh out many lateral ſhoots and begin to flower. At this time the hop gardens make a moſt beautiful appearance, the poles being entirely covered with verdure, and the flowers depending from them in cluſters and light feſtoons. The hops, which are the ſcaly ſeed-veſſels of the female plants, are picked as ſoon as the ſeed is formed; for which purpoſe the poles are taken up with the plants clinging to them, and the hops picked off by women and children, after which they are dried over a charcoal fire, and expoſed a few days to the air in

order to take off the criſpneſs produced by the heat; they are then cloſely packed in ſacks and ſent to market, where they are purchaſed by the brewers, who employ them in giving the fine bitter flavour to their beer, which both improves its taſte and makes it keep longer than it otherwiſe would do. This crop is perhaps the moſt precarious and uncertain of any, on which account hops are a commodity that is more the object of commercial ſpeculation than any other. The plants are infeſted by grubs that harbour in their roots, and greatly delay, and ſometimes entirely prevent, their ſhooting; and theſe grubs changing into flies, ſwarm upon and deſtroy the leaves and ſhoots of ſuch as eſcaped them in their grub ſtate: this peſt is called the *fen*. *Blights*, too, of various ſorts, both with and without inſects, often fruſtrate the hopes of the cultivator, and in a few days deſolate the moſt promiſing plantations. No effectual remedy has yet been found for theſe evils;

it

it is probable, however, that ſome benefit might be produced by planting a ſmall number of *male* hops in each garden (for the hop is of that order of vegetables which bear the male and female flowers on different plants). The advantage of this practice is experimentally proved with regard to the aſh and elm, which are of the ſame order; for it is remarked, that the plantations in which there is a mixture of male and female trees, are far more vigorous, and leſs liable to blights, than thoſe which conſiſt ſolely of females or males.

The number of plants in flower is now very ſenſibly diminiſhed. Thoſe of the former months are running faſt to ſeed, and few new ones ſupply their places. The uncultivated heaths and commons are now, however, in their chief beauty from the flowers of the different kinds of heath or ling, with which they are covered, ſo as to ſpread a rich purple hue over

the whole ground. Low moiſt lands, too, are adorned with the gentiana amarella, and the beautiful purple bloſſoms of the colchicum autumnale, or meadow ſaffron.

Several ſpecies of the numerous tribe of *ferns* begin now to flower. Theſe plants, together with moſſes, lichens, and the various kinds of ſea-weed, are arranged by botaniſts in the claſs *Cryptogamia*, the individuals of which have ſmall inconſpicuous and generally colourleſs flowers, or rather ſeed veſſels, for they have no petals. The talleſt ſpecies in theſe kindred families are the *ferns*, ſome of which, that are natives of America, greatly reſemble, and equal in height, the lower of the kinds of palm trees. They may be diſtinguiſhed by their pinnated or finely divided winged leaves, and their ruſt coloured ſeeds, which are produced in ſmall circular dots, or lines, or patches, on the back of the leaves. One of the commoneſt ſpecies in this country

country is the *fern*, or *brakes*; another not unfrequent ſort is the *polypody*, or *harts-tongue*, with long undivided leaves of a bright green, adorning with their tufts the baſe of moiſt ſhady rocks: but the moſt beautiful kind that this iſland produces is the *female*, or *wood-polypody*, with large deep green tufted leaves, very finely divided, frequently found in conſiderable plenty in rocky woods; when placed in a green-houſe it acquires a brighter colour, and a more luxuriant growth; it becomes an evergreen and extremely ornamental plant. The uſes in the economy of nature of this numerous family are many and important: growing in places where few other vegetables will flouriſh, as heaths, commons, marſhes, and woods, they afford by their broad ſpreading leaves a very acceptable ſhelter to various birds, and ſmall quadrupeds, as well as to the more lowly and tender plants; the ſweet mucilage with

which their roots abound, gives nouriſhment to many inſects, and contributes to the ſuſtenance of the human ſpecies in the northern and moſt barren parts of the globe: in this country, the common brakes are made uſe of for littering cattle, and thatching, and when green, are burnt in great quantity for the alkali that they contain.

Some of the choiceſt wall fruits are now coming into ſeaſon

> The ſunny wall
> Preſents the downy peach, the ſhining plum,
> The ruddy fragrant nectarine, and dark
> Beneath his ample leaf, the luſcious fig.

Some time about the middle of the month, the viper brings forth her young: they couple in March or April, and from twelve to twenty-five eggs are formed in the ovary of the female, and hatched there; from which ſoon after iſſue the young, nearly of the ſize of earth-worms.

The

The inſects that make their appearance during this month, are the apis manicata, one of the ſpecies of ſolitary bees; the papilio machaon, ſemele, phlæas, and paphia, ſome of the lateſt butterflies; the phalena pacta, a white moth; and the ptinus pectinicornis, which in its larva ſtate is well known by the holes that it bores in wooden furniture. Flies alſo abound in windows at this period. Bulls begin their ſhrill autumnal bellowing.

About the 12th of Auguſt the largeſt of the ſwallow tribe, the ſwift, or long-wing, diſappears. As the weather is ſtill warm, they cannot be ſuppoſed to retire to holes and caverns, and become torpid during the winter; and being ſo admirably formed for flight, it can ſcarcely be doubted that they now migrate to ſome of the ſouthern regions. Nearly at the ſame time rooks no longer paſs the night from home, but rooſt in their

neſt

neſt trees. Young broods of goldfinches are ſtill ſeen; lapwings and linnets begin to congregate; and the redbreaſt, one of our fineſt, though commoneſt ſongſters, renews his muſic about the end of the month.

## SEPTEMBER.

Now ſoftened ſuns a mellow luſtre ſhed,
The laden orchards glow with tempting red;
On hazel boughs the cluſters hang embrown'd,
And with the ſportſman's war the new-ſhorn
fields reſound.

THIS is, in general, a very pleaſant month, the diſtinguiſhing ſoftneſs and ſerenity of autumn prevailing through great part of it. The days are now very ſenſibly ſhortened, and the mornings and evenings are chill and damp, though the warmth is ſtill conſiderable in the middle of the day. This variation of temperature is one cauſe why autumn is an unhealthy time, eſpecially in the warmer climates, and in moiſt ſituations; perſons who are obliged to go abroad early or late in this ſeaſon ſhould be guarded by warm clothing againſt the cold fogs.

In

In late years, and eſpecially in the northern parts of the iſland, a good deal of corn is abroad at the beginning of September, on which account, the day in which partridge-ſhooting commences, has of late been deferred by the legiſlature from the firſt to the fourteenth of this month.

The partridge is one of the ſpecies of the order of *gallinæ*, which includes thoſe birds which have a ſtrong, hard, ſomewhat curved bill, ſhort wings, rather long and muſcular legs, and the toes terminated in ſhort thick ſtraight nails; of this conformation the neceſſary reſult is their feeding on grain, and other ſeeds, which they find by ſcratching up the earth; and their living chiefly on the ground, making much uſe of their legs, and little of their wings.

Partridges pair early in the ſpring, and about the month of May, depoſit their eggs to the number of ſixteen or eighteen in a ſhallow hole on the bare ground; the

the hen ſits twenty-two days, and the young come forth full feathered like chickens, and capable of running, and picking up ants, ſlugs, grain, or any other food that is ſhewn to them by their parents.

While the corn is ſtanding they have a ready and ſafe retreat from moſt of their numerous enemies, and when they happen to be ſurpriſed, will exhibit wonderful inſtances of inſtinct in their attachment to their young, and of courage and ſkill in their defence. If danger approaches their young brood before they are able to fly, both the parents immediately take wing, and the young ones cower down under the neareſt ſhelter, where they remain perfectly motionleſs; the hen, after having flown two or three hundred yards, lights on the ground, and immediately running along the furrows, ſoon arrives at the place whence ſhe ſet out, collects her little family, and withdraws them to a place of ſafety; the cock, in the mean

time,

time, endeavours to engage the attention of the ſportſman by fluttering before him a few yards at a time, as if wounded, and thus draws him in the eagerneſs of purſuit to a ſufficient diſtance from his young: after which, when all danger is over, the call of the female directs him to her retreat. In the abſence of the cock the hen will take this part upon herſelf. Of this an intereſting example is found in White's Naturaliſt's Calendar.

"A hen partridge came out of a ditch, and ran along, ſhivering with her wings, and crying out as if wounded, and unable to get from us. While the dam acted this diſtreſs, the boy who attended me ſaw her brood, that was ſmall and unable to fly, run for ſhelter into an old fox-earth under the bank."

When the corn is cut, partridges generally reſort in the day-time to groves and covers, to be out of the reach of birds of prey; but at night the dread of foxes, weaſels, and other ſmall wild quadrupeds that

that haunt theſe ſheltered places, drives them to the open ſtubble, in the middle of which they neſtle together, and ſpend the hours of darkneſs. Their moſt formidable enemy, however, is man, from whom they have no means of eſcape: his pointers diſcover them in their moſt ſecret hiding-places, and either oblige them to take wing and expoſe themſelves to be ſhot, or to endure the ſtill greater danger of being encloſed in nets on the ground by whole coveys at once.

In his mid career, the ſpaniel ſtruck,
Stiff, by the tainted gale, with open noſe,
Outſtretch'd, and finely ſenſible, *draws* full,
Fearful and cautious, on the latent prey;
As in the ſun the circling covey baſk
Their varied plumes, and watchful every way
Thro' the rough ſtubble turn the ſecret eye.

THOMSON.

A ſingular vegetable production which is gathered this month, is *ſaffron*. The ſaffron plant is a ſpecies of crocus, cultivated chiefly in Eſſex, and in a conſiderable

able tract of ground, about ten miles acroſs, between Cambridge and Saffron-walden. The ſaffron-grounds vary in extent from one to three acres, which, after being well manured, are planted ſome time in the month of July, allowing about 200,000 roots to an acre: theſe flower ſucceſſively for about three weeks in September, and the bloſſoms are collected every day before they are thoroughly expanded: when gathered, they are immediately ſpread upon a large table, and the fine branched filaments on the inſide of the flower, called *ſtamens*, or *chives*, are pulled out by women and children; all the reſt is thrown away. The crop thus procured is dried in flat ſquare cakes, and then becomes ready for ſale. A ſaffron-ground laſts three years; and on an average yields for the firſt crop about ten pounds of wet ſaffron, or two of dried, per acre; the produce of the two next years is about twenty-four pounds of dried: ſo that the whole uſeful produce of an acre

in three years, is not more than twenty-ſix pounds weight. Saffron is of a deep orange colour, and a very ſtrong aromatic odour; it is uſed in medicine as a cordial, and was formerly much eſteemed in cookery. It gives a fine bright yellow dye. That produced in England is generally eſteemed the beſt.

Very few other flowers, except the ivy, open in this month; but ſome degree of variety is introduced into the landſcape by the ripening fruits.

The labours of the huſbandman have but a very ſhort intermiſſion; for no ſooner is the harveſt gathered in, than the fields are again ploughed up and prepared for the winter corn, rye, and wheat, which is ſown during this month and the next.

At this time it is proper to ſtraighten the entrance of bee-hives, that waſps and other depredators may have leſs opportunity of getting in and devouring the honey.

The

The annual arrival of the herrings, offers at this time a peculiar and valuable harveſt to the inhabitants of the eaſtern and weſtern coaſts of the iſland.

The great winter rendezvous of the herring is within the arctic circle, where they continue many months to recruit themſelves after ſpawning in thoſe unfathomed depths, that ſwarm with inſects upon which they feed. This innumerable army begins to put itſelf in motion in the ſpring, in order to depoſit its ſpawn in the warmer latitudes. Its forerunners appear off the Shetland iſlands in April and May, but the grand ſhoal does not appear till June: it is attended by gannets, and other ſea birds, in prodigious multitudes, and vaſt numbers of dog-fiſh and porpoiſes, all of which are ſupported without ſenſibly diminiſhing a hoſt, in which millions more or leſs are of no account. The breadth and depth of the main body is ſuch as to alter the appearance of the very ocean; it is divided

vided into diſtinct columns of five or ſix miles in length, and three or four in breadth, driving the water before them with a very perceptible rippling; ſometimes they ſink for the ſpace of ten or fifteen minutes, then riſe again to the ſurface, and in bright weather exhibit a reſplendency of colours like a field of gems.

The firſt check that this army experiences in its march ſouthwards, is from the Shetland iſles, which divide it into two parts; the eaſtern wing paſſes on towards Yarmouth, the great and ancient mart for herrings, filling every bay and creek with its numbers; it then advances through the Britiſh channel, and diſappears. The weſtern wing, after offering itſelf to the great fiſhing ſtations in the Hebrides, proceeds towards the north of Ireland, where it is obliged to make a ſecond diviſion: the one takes to the weſtern ſide, and is ſcarcely perceived, being ſoon loſt in the immenſity of the Atlantic; but the other,

paſſing

paſſing into the Iriſh ſea, feeds and rejoices the inhabitants of moſt of the coaſts that border on it.

Towards the end of the month, the chimney or common ſwallow diſappears. There have been various conjectures concerning the manner in which theſe birds, and ſome of their kindred ſpecies, diſpoſe of themſelves during the winter. The ſwift is the only one of this genus, about which there appears to be little or no controverſy, its early retreat and ſtrength of wing rendering its migration almoſt certain: but with regard to the reſt, namely, the ſwallow, the martin, and ſand-martin, there are three current opinions, each of which deſerves conſideration.

The firſt, which is principally adopted by the Swediſh and other northern naturaliſts, is, that theſe birds paſs the cold months in a *torpid ſtate under water*. This apparently improbable ſuppoſition is ſupported by the following arguments: the

places

places in which the ſpecies in queſtion are ſeen, the lateſt and earlieſt in the year, are the banks of large deep ponds and rivers. About the time of their diſappearing they are obſerved to rooſt in vaſt numbers on branches of trees that overhang the water, which by their weight are obſerved to be bent, ſo as nearly to touch the ſurface. Some obſcure reports of ſwallows having been dragged up in a torpid ſtate from the bottom of lakes, have been eagerly embraced by the favourers of this hypotheſis, and the proof is thus ſuppoſed to be complete. Againſt this opinion there are the following obvious arguments: the ſwallow tribe live wholly on inſect-food, and it is in the neighbourhood of waters that gnats and various other winged inſects principally abound; when therefore food is ſcarce, it is not to be wondered at, that theſe birds ſhould reſort to thoſe places where it is almoſt always to be found in a greater or

leſs quantity. Young ſwallows, in autumn, are univerſally obſerved to rooſt on trees, and to be extremely fond of congregating; when therefore they have fatigued themſelves with hawking all day about the water, it is highly probable that they ſhould collect in large numbers on the neareſt trees; and, beſides, thoſe branches that hang over the water are leſs acceſſible to rats, weaſels, and others of their enemies. Another reaſon too, on the ſuppoſition of their migration, may account for their reſorting in autumn to the ſides of rivers; for by following the courſe of the ſtream, they would more readily find their way to the ſea. The ſuppoſed fact of ſwallows having been found in a torpid ſtate under water, greatly wants confirmation: it is likely enough, indeed, that they may have been drowned while rooſting, by the riſing tide, and been fiſhed up a few hours after, poſſibly, even while in a ſtate of ſuſpended animation;

animation; but their internal ſtructure wholly unfits them for exiſting for any length of time immerſed in water.

A more probable opinion than the former, is that thoſe ſpecies of ſwallows above mentioned, *retire like bats to caverns and other ſheltered places during the cold weather, where they paſs their time in a torpid ſtate*, except when, revived by a fine day or two, they are induced by hunger to make their appearance in the open air: for it is a known fact, and one that happens almoſt every year, that a week of tolerably mild weather in the middle of winter never fails to bring out a few ſwallows, who diſappear again on the return of the froſt. There are alſo a few ſufficiently authenticated inſtances of ſwallows having been found torpid in the ſhafts of old coal-pits and cliffs by the ſea-ſide. Theſe facts, as far as they go, are concluſive; namely, that ſome individuals of theſe ſpecies paſs the winter in this country in a torpid ſtate; but the inſtances are

by no means ſufficiently numerous to preclude the neceſſity of diſpoſing of the main body in another way; for from their multitudes, if they all never quitted this country, it ought to be by no means an uncommon thing to diſcover them in their winter abodes; eſpecially as of late years they have been accurately ſearched for, and the holes of the ſand-martins have been repeatedly laid open without the ſmalleſt ſucceſs.

Concerning the third hypotheſis, the *migration* of the ſwallow tribes, it may be obſerved, that all the birds of this genus are far better fliers than many others whoſe migration is univerſally allowed, and that the deficiency of food is a very ſufficient motive to induce them to retreat to warmer climates;—that the ſudden appearance in ſpring of the main body, and their diſappearance in autumn, together with the occaſional appearance of a *few* during mild weather in the winter months, ſpeaks loudly in favour of migration. But there

there are yet other more deciſive facts to be related in proof of this opinion.

Mr. White, one of the moſt accurate obſervers that this country has produced, in his Natural Hiſtory of Selborne ſays, "If ever I ſaw any thing like actual migration, it was laſt Michaelmas day. I was travelling, and out early in the morning; at firſt there was a vaſt fog, but by the time that I was got ſeven or eight miles towards the coaſt the ſun broke out into a delicate warm day. We were then on a large heath or common, and I could diſcern, as the miſt began to clear away, great numbers of ſwallows (hirundines ruſticæ) cluſtering on the ſtunted ſhrubs and buſhes as if they had rooſted there all night. As ſoon as the air became clear and pleaſant they were all on the wing at once; and by a placid and eaſy flight, proceeded on ſouthwards toward the ſea; after this I did not ſee any more flocks, only now and then a ſtraggler."

Having thus launched our ſwallows, let us follow them in their courſe acroſs the ſea. In the ſpring of the year, Sir Charles Wager on his return up channel from a cruiſe, during ſome very ſtormy weather, as ſoon as he came within ſoundings, fell in with a large flock of ſwallows, who immediately ſettled like a ſwarm of bees on his rigging; they were ſo tired as to ſuffer themſelves to be taken by hand, and ſo much emaciated from the long continuance of heavy gales that they had to contend with, as to be reduced to mere ſkin and bone. After reſting themſelves for the night, they renewed their flight next morning. Willoughby, the firſt Britiſh ornithologiſt, during a viſit in Spain, obſerved multitudes of half ſtarved ſwallows in the province of Andaluſia, on their progreſs to the ſouth. And the brother of Mr. White before mentioned, who reſided a conſiderable time at Gibraltar, had ocular demonſtration during the

ſpring

ſpring and autumn of the migration of birds acroſs the Straits, among whom were myriads of the ſwallow tribe, and many of our ſoft-billed birds of paſſage. In paſſing theſe Straits they ſcout and hurry along in little detached parties of ſix or ſeven in a company, and ſweeping low juſt over the land and water, direct their courſe to the oppoſite continent at the narroweſt paſſage that they can find. They uſually ſlope acroſs the bay to the ſouth-weſt, and ſo paſs over to Tangier.

From all the above conſiderations it ſeems to be pretty evident that ſwallows do not ſpend the winter under water: that a few, probably ſome of the later broods, remain with us during the winter, for the moſt part, in a ſtate of torpidity: but that the main body migrates acroſs the channel to Spain, and thence at Gibraltar paſſes to the northern ſhores of Africa, returning by the ſame road, in the ſpring, to Great Britain.

When Autumn ſcatters his departing gleams,
Warn'd of approaching Winter, gathered, play
The ſwallow-people; and toſs'd wide around,
O'er the calm ſky, in convolution ſwift,
The feathered eddy floats: rejoicing once,
Ere to their wintry ſlumbers they retire;
In cliffers clung, beneath the mould'ring bank,
And where, unpierc'd by froſt, the cavern ſweats.
Or rather into warmer climes convey'd,
With other kindred birds of ſeaſon, there
They twitter cheerful, till the vernal months
Invite them welcome back: for, thronging, now
Innumerous wings are in commotion all.

THOMSON.

Beſides the ſwallow tribe, many other of the ſmall ſoft-billed birds that feed on inſects diſappear on the approach of cold weather. To judge from their diminutive ſize and feebleneſs of wing, it would ſcarcely be imagined that theſe could poſſibly emigrate. It is probable, indeed, that numbers of them are annually loſt in attempting to croſs the ſea, but from the circumſtance of their having been actually ſeen croſſing the ſtraits of Gibraltar

braltar to Africa late in autumn, and returning northward early in ſpring; and from there being no inſtance on record of their having been ſeen during our winters, either in a ſtate of torpidity, or rouſed into activity by a warm day, there ſeems no reaſon to doubt the reality of their emigration.

On the other hand, ſome birds at this ſeaſon arrive from ſtill more northerly countries to ſpend the winter with us. The fieldfare and redwing, whoſe departure was mentioned in March, return about the end of September; at which time alſo an internal migration takes place of the ring-ouzel from the mountains of Wales, Scotland, and the north of England, to the ſouthern coaſt and other ſheltered ſituations. Theſe three ſpecies feed chiefly on the berries with which our woods and hedges are plentifully ſtored the greater part of the winter.

The wood-owl now begins to hoot, the ſtone-curlew to clamour; and thoſe

ſweet and mellow-toned ſongſters the woodlark, thruſh, and blackbird, commence at this time their autumnal muſic.

About the middle of the month, the common ſnake *ſloughs* or caſts its ſkin; it appears to part with its whole external covering, even the outer coat of the eyes ſcales off, and is left in the head of the ſlough like a pair of ſpectacles. While the ſnake undergoes this operation he entangles himſelf intricately in the graſs and weeds, in order by their friction to facilitate the changing of his garment. The ſlough is found inverted without any rent in it, from which it appears that this reptile creeps out at the mouth of the ſlough, quitting the tail part laſt, in the ſame manner as eels are ſkinned.

Very few inſects come forth ſo late in the ſeaſon; the phalena ruſſula and papilio hyale, however, now make their appearance.

The moſt uſeful fruit that this country affords, the apple, ſucceſſively ripens, ac-

cording to its ſeveral varieties, from July to October: but the principal harveſt of them is about the cloſe of this month. They are now gathered for our Engliſh vintage, the *cyder-making*, which in ſome counties, particularly Worceſterſhire, Somerſetſhire, and Devonſhire, is a buſy and important employment; but, like the hop, it is ſo precarious a produce, as to render it unwiſe for the cultivator to place his chief dependence on it.

Autumn paints
Auſonian hills with grapes, whilſt Engliſh plains
Bluſh with pomaceous harveſts, breathing ſweets.
O let me now, when the kind early dew
Unlocks th' emboſom'd odours, walk among
The well rang'd files of trees, whoſe full-aged ſtore
Diffuſe ambroſial ſteams.
Now, now's the time; ere haſty ſuns forbid
To work, diſburthen thou thy ſapleſs wood
Of its rich progeny; the turgid fruit
Abounds with mellow liquor.

PHILIPS.

The apples, after being carefully gathered, are laid a while to mellow, and then cruſhed in a mill and preſſed till all their juice is extracted. This, after being fermented, becomes cyder, which may properly be called *apple-wine*. Pears treated in the ſame manner yield a vinous liquor called *perry*. The richeſt and ſtrongeſt kinds are diſtributed for ſale over the whole country, and the inferior ſorts ſerve as common drink in the diſtricts where they are produced.

Another agreeable product of our thickets and gardens, the hazel-nut, is fit for gathering at this time.

Ye virgins, come, for you their lateſt ſong
The woodlands raiſe; the cluſtering nuts for you
The lover finds amid the ſecret ſhade;
And, where they burniſh on the topmoſt bough,
With active vigour cruſhes down the tree,
Or ſhakes them ripe from the reſigning buſh.

The oak now begins to ſhed its acorns, and the nuts fall from the beech, both of which

which have the name of *maſt*. Theſe, in the extenſive woodland tracts of the Continent afford a plentiful food to the ſwine, which are allowed to range in them at this period. In England, moſt of the old foreſts are fallen to decay, but in the few that ſtill remain in the ſouthern parts of the iſland, particularly the New foreſt, this annual ſupply of what in primitive times conſtituted the chief food of man, affords a luxurious paſturage for ſix weeks, from about the end of September, to the hogs that are kept on the borders of the foreſt. In Mr. Gilpin's elegant *Remarks on Foreſt Scenery*, there is a moſt entertaining account of the manners and management of the hogs during the time of their autumnal reſidence in the woods; from which the following account is extracted.

"The firſt ſtep the ſwineherd takes, is to inveſtigate ſome cloſe ſheltered part of the foreſt, where there is a conveniency of water, and plenty of oak or beech maſt;

maſt; the former of which he prefers when he can have it in abundance. He next fixes on ſome ſpreading tree, round the bole of which he wattles a ſlight, circular fence of the dimenſions he wants; and covering it roughly with boughs and ſods, he fills it plentifully with ſtraw or fern.

" Having made this preparation, he collects his colony among the farmers, with whom he commonly agrees for a ſhilling a head, and will get together a herd of five or ſix hundred hogs. Having driven them to their deſtined habitation, he gives them a plentiful ſupper of acorns or beech maſt, which he had already provided, ſounding his horn during the repaſt. He then turns them into the litter, where, after a long journey and a hearty meal, they ſleep deliciouſly.

" The next morning he lets them look a little around them, ſhows them the pool or ſtream where they may occaſionally drink, leaves them to pick up the

the offals of the laſt night's meal, and as evening draws on, gives them another plentiful repaſt under the neighbouring trees, which rain acorns upon them for an hour together at the ſound of his horn. He then ſends them again to ſleep.

" The following day he is perhaps at the pains of procuring them another meal, with muſic playing as uſual. He then leaves them a little more to themſelves, having an eye, however, on their evening hours. But as their bellies are full, they ſeldom wander far from home, retiring commonly very orderly and early to bed.

" After this he throws his ſtye open, and leaves them to cater for themſelves; and from henceforward has little more trouble with them during the whole time of their migration. Now and then in calm weather, when maſt falls ſparingly, he calls them perhaps together by the muſic of

of his horn to a gratuitous meal; but in general they need little attention, returning regularly home at night, though they often wander in the day two or three miles from their ſtye. There are experienced leaders in all herds, which have ſpent this roving life before; and can inſtruct their juniors in the method of it. By this management the herd is carried home to their reſpective owners in ſuch condition, that a little dry meat will ſoon fatten them."

On the twenty-ſecond of September happens the autumnal equinox; that is, the ſun arrives at one of the two equinoctial points, formed by the croſſing of the equator and equinoctial circle, at which period the days and nights are equal all over the earth. This, as well as the vernal equinox, is generally attended with heavy ſtorms of wind and rain, which throw down much of the fruit that yet remains on the trees.

By

By the end of this month the leaves of many trees loſe their green colour, and begin to aſſume their autumnal tints; which, however, are not complete till the enſuing month.

# OCTOBER.

The fading many-colour'd woods,
Shade deep'ning over ſhade, the country round
Imbrown; a crowded umbrage, duſk and dun,
Of every hue, from wan declining green
To ſooty dark.

THE chief buſineſs of nature at this ſeaſon, as far as concerns the vegetable world, appears to be *diſſemination*. Plants having gone through the progreſſive ſtages of ſpringing, flowering, and ſeeding, have at length brought to maturity the rudiments of a future progeny, which are now to be depoſited in the foſtering boſom of the earth. This being performed, the parent vegetable, if of the *herbaceous* kind, either totally periſhes or dies down to the root; if a *tree*, or *ſhrub*, it caſts all thoſe tender leaves that the ſpring

ſpring and ſummer had put forth. Seeds are ſcattered by the hand of nature in various manners. Thoſe of them which are furniſhed with plumes, or wings, are diſperſed far and wide by the high winds which ariſe about this time. Hence plants with ſuch ſeeds are of all others the moſt generally to be met with; as dandelion, groundſel, ragwort, thiſtles, &c. Others, by means of hooks with which they are furniſhed, lay hold of paſſing animals, and are thus carried to diſtant places. The common burs are examples of this contrivance. Several when ripe are thrown out with conſiderable force from their receptacle by means of a ſtrong ſpiral elaſtic ſpring, of which the *impatiens*, or touch-me-not, and all the ſpecies of *cardamine*, or cuckoo-flower, are inſtances. Many are contained in berries, which being eaten by birds, the ſeeds are diſcharged again uninjured, and grow wherever they happen to light.

Thus

Thus has nature carefully provided for the propagation and wide diſtribution of her vegetable offspring.

The gloom of the declining year is, however, during this month enlivened by the variety of rich and bright colours, exhibited by the fading leaves of ſhrubs and trees. So varied and glowing, indeed, are the tints, ſo harmonious their combinations, ſo exquiſitely tender and ſoothing the emotions that they give birth to, as to render our autumnal ſcenery, both to the painter and man of ſentiment, more intereſting than the bloſſoms of ſpring or the radiance and verdure of ſummer.

Thoſe virgin leaves, of pureſt vivid green,
Which charm'd ere yet they trembled on the trees,
Now cheer the ſober landſcape in decay:
The lime firſt fading; and the golden birch,
With bark of ſilver hue; the moſs-grown oak,
Tenacious of its leaves of ruſſet brown;
Th' enſanguin'd dogwood; and a thouſand tints
Which Flora, dreſs'd in all her pride of bloom,
Could ſcarcely equal, decorate the groves.

To theſe fugitive colours are added the more durable ones of ripened berries, a variety of which now adorn our hedges. Among theſe are particularly diſtinguiſhed the hip, the fruit of the wild roſe; the haw, of the hawthorn; the ſloe, of the blackthorn; the blackberry, of the bramble; and the berries of the bryony, privet, honeyſuckle, elder, holly, and woody-nightſhade. Theſe are a valuable ſupply for the birds during the cold weather; and it is ſaid, upon the authority of lord Bacon, that they are moſt plentiful when the enſuing winter is to be moſt ſevere.

The common martin, whoſe neſts, hung under the eaves of our houſes, afford ſo agreeable a ſpectacle of parental fondneſs and aſſiduity, after having reared its ſecond brood, diſappears about the middle of October; and in a few days after, its example is followed by the ſand-martin, the ſmalleſt kind of ſwallow, as well as the lateſt in its migration.

The

The royſton or hooded crow, which breeds in Scotland and other northern regions, migrates to the ſouthern diſtricts of this iſland, being forced by the ſnow from its native haunts. It is readily diſtinguiſhed by its aſh-coloured back, and black head. Next to the raven it is the moſt deſtructive bird of its genus that is known in this country, deſtroying lambs and young partridges, and moor-fowl, and picking out the eyes of horſes that happen to be entangled in bogs; on which account, in ſeveral parts of Scotland, it is proſcribed, and a reward offered for its head. The woodcock about this time begins to be found on our eaſtern coaſts, though the main body of them does not arrive till November or December. Various kinds of water-fowl arrive from their arctic ſummer-reſidence in ſearch of a more temperate winter on the ſhores of Britain. About the middle of the month wild-geeſe quit the fens, and go up to the

rye

rye lands, where they devour the young corn.

It is curious and highly amuſing to obſerve the evening proceedings of the rooks at this period of the year. Juſt before duſk, returning from the foraging excurſions of the day, before they betake themſelves to rooſt in their neſt-trees, they congregate in large numbers, and wheeling round in the air, ſport and dive in a playful manner, all the while exerting their voices, and making a loud cawing, which being blended and ſoftened by diſtance, becomes a pleaſing murmur, not unlike the cry of a pack of hounds in deep hollow woods, or the tumbling of the tide on a pebbly ſhore. Stares begin to congregate about this time, aſſembling in the fen countries in ſuch vaſt multitudes as to deſtroy by their weight the reeds on which they perch, to the damage of the farmers, who derive no inconſiderable profit from the ſale of the reeds, which,

for

for thatching, are ſuperior to every other material.

The weather during this month is ſometimes extremely miſty, with a perfect calm. The ground is covered with ſpiders webs innumerable, croſſing the paths, extending from ſhrub to ſhrub, and floating in the air. This appearance is called *goſſamer*, and is cauſed by an infinite multitude of ſmall ſpiders, which, when they want to change their place, have a power of ſhooting forth ſeveral long threads, to which they attach themſelves, and thus becoming buoyant, are carried gently through the air as long as they pleaſe, after which, by coiling up their threads, they deſcend very gradually to the ground. A remarkable ſhower of goſſamer is deſcribed in the following quotation from *White's Natural Hiſtory of Selborne*. "On September 21, 1741, being intent on field diverſions, I roſe before day-break; when I came into the enclo-

ſures,

ſures, I found the ſtubbles and clover-grounds matted all over with a thick coat of cobweb, in the meſhes of which a copious and heavy dew hung ſo plentifully, that the whole face of the country ſeemed, as it were, covered with two or three ſetting nets drawn one over another. When the dogs attempted to hunt, their eyes were ſo blinded and hoodwinked that they could not proceed, but were obliged to lie down and ſcrape the incumbrances from their faces with their fore-feet."—"As the morning advanced, the ſun became bright and warm, and the day turned out one of thoſe moſt lovely ones which no ſeaſon but the autumn produces; cloudleſs, calm, ſerene, and worthy of the ſouth of France itſelf."

"About nine an appearance very unuſual began to demand our attention, a ſhower of cobwebs falling from very elevated regions, and continuing without any interruption till the cloſe of day. Theſe webs were not ſingle filmy threads, floating

ing in the air in all directions, but perfect flakes or rags; ſome near an inch broad and five or ſix long. On every ſide as the obſerver turned his eyes, might he behold a continual ſucceſſion of freſh flakes falling into his ſight, and twinkling like ſtars as they turned their ſides towards the ſun. Neither before nor after was any ſuch ſhower obſerved; but on this day the flakes hung in the trees and hedges ſo thick that a diligent perſon might have gathered baſkets full."

The fogs during this month and the next, are more frequent and thicker than at any other period of the year. The reaſon of this will be evident from conſidering the cauſe of fogs. There is a conſtant and very large exhalation from the ſurface of the earth at all ſeaſons, of water in the form of vapour; and the warmer the ground the greater will be the evaporation. When the air is warmer, or even but a little colder than the earth, the aſcent of vapour is not perceptible to the

the eye; but when the temperature of the air is conſiderably lower, the vapour as ſoon as it riſes is deprived of part of its heat, the watery particles are brought more into union, and they become viſible in the form of ſteam; it is alſo eſſential to the formation of fog that there ſhould be little or no wind ſtirring, in order that the riſing exhalations may have full opportunity to condenſe. The heat of the middle of the days in autumn is ſtill ſufficient to warm the earth and cauſe a large aſcent of vapour, which the chilling froſty nights, which are alſo generally very calm, condenſe into miſts; differing from clouds only in remaining on the ſurface of the ground.

Now by the cool declining year condens'd,
Deſcend the copious exhalations, check'd
As up the middle ſky unſeen they ſtole,
And roll the doubling fogs around the hill.
- - - - - - - - - - - Thence expanding far,
The huge duſk, gradual, ſwallows up the plain:
Vaniſh the woods; the dim-ſeen river ſeems
Sullen, and ſlow, to roll the miſty wave.

Even in the height of noon oppreſt, the ſun
Sheds weak, and blunt, his wide-refracted ray;
Whence glaring oft, with many a broaden'd orb,
He frights the nations. Indiſtinct on earth,
Seen thro' the turbid air, beyond the life
Objects appear; and, wilder'd, o'er the waſte
The ſhepherd ſtalks gigantic. THOMSON.

This month is the height of the hunting ſeaſon: the temperature of the weather being peculiarly favourable to the ſport; and as the products of the earth are all got in, little damage is done by the horſemen in purſuing their chace acroſs the fields.

All now is free as air, and the gay pack
In the rough briſtly ſtubbles range unblam'd;
No widow's tears o'erflow, no ſecret curſe
Swells in the farmer's breaſt, which his pale lips
Trembling conceal, by his fierce landlord aw'd:
But courteous now he levels every fence,
Joins in the common cry, and halloos loud,
Charm'd with the rattling thunder of the field.
SOMERVILLE.

It is uſually in October that the beehives are deſpoiled of their honey. As long

long as flowers are plentiful, the bees continue adding to their ſtore; but when theſe fail, they are obliged to ſubſiſt on the produce of their ſummer labours; from this time, therefore, the hive decreaſes in value. Its condition is judged of by its weight. The common way of procuring the honey, is by deſtroying the induſtrious collectors of it, with the fumes of burning brimſtone. This cruel neceſſity may, however, be prevented by uſing hives or boxes ſo contrived as to exclude the bees from the different partitions as they become filled; or by employing fumes that will ſtupify without killing them. In this caſe enough of the honey muſt be left for their ſubſiſtence during winter; but this is found to deduct ſo materially from the profits, as, in a pecuniary point of view, to render it a much leſs eligible way than the uſual one.

In moſt of the wine countries of Europe, the *vintage* takes place in October. The grape is one of the lateſt fruits in

ripening. When gathered they are immediately preſſed, and the juice is fermented like that of apples in making cyder. A great variety of wines are produced from the different kinds of grapes, or the diverſity of climates where they grow. In England, this fruit does not ripen with ſufficient conſtancy to be worth cultivation for the purpoſe of making wine.

This month is particularly choſen, on account of its mild temperature, for the brewing of malt liquor deſigned for long keeping, which is therefore commonly called *old October*.

The firſt of the month is the day appointed, by act of parliament, for the commencement of the *decoy* buſineſs, which about the cloſe of October is at its height. The extenſive marſh-lands of Lincolnſhire are the tract that is chiefly reforted to in this country by the wild-ducks, and other water-fowl, and prodigious numbers of them are annually taken in the decoys.

A decoy

A decoy is generally made where there is a large unfrequented pond ſurrounded by wood, and backed by a marſhy and uncultivated country. In different quarters of the pond are conſtructed *pipes* as they are called, or narrow ditches, covered with a continued arch of netting, and ſuſpended on hoops, growing narrower as they advance into the wood, and terminating in a purſe net. On both ſides of the pipe are reed-hedges with intervals between, for the decoy-man to obſerve what is going on; a number of *decoy-ducks* are alſo procured, which are taught to lead the wild ones into the ſnare.

As ſoon as the evening ſets in, the decoy *riſes* and the wild-fowl approach the ſhores to feed during the night; the flapping of their wings may be heard in a ſtill night to a great diſtance, and is a pleaſing though melancholy ſound. The decoy-ducks ſoon meet with the wild ones, and conduct them to the mouth of the ſnare: the man behind the reeds then

throws into the pipe ſome hempſeed, of which theſe birds are very fond, and are thus tempted to advance a little way under the netting. A very ſmall dog well trained for the purpoſe is next ordered to play about before the ſcreens, and bark at the ducks, who, vexed at being diſturbed by ſo petty an aſſailant, advance to drive him off. When they have by this means been ſeduced a conſiderable way up the tunnel, the decoy-duck by diving gets out of the arched net, and the man coming from behind the hedge appears at the entrance of the pipe: the wild-fowl not daring to ruſh by him immediately daſh forwards into the purſe-net, where they are taken.

The London market is principally ſupplied from the Lincolnſhire decoys; ten of which, near Wainfleet, have been known to ſend to the metropolis, in a ſingle ſeaſon, thirty-one thouſand two hundred ducks, teals, and wigeons.

The farmer continues to ſow his corn during

during this month; and wheat is frequently not all ſown till the end of it. When the weather is too wet for this buſineſs he plows up the ſtubble fields for winter fallows. Acorns are ſown at this time, and foreſt and fruit trees are planted. At the very cloſe of the month a few flowers ſtill cheer the eye; and there is a ſecond blow of ſome kinds, particularly the woodbine. But the ſcent of all theſe late flowers is comparatively very faint. The greenhouſe, however, is in high perfection at this period, and by its contraſt with the nakedneſs of the fields and garden is now doubly grateful.

Unconſcious of a leſs propitious clime
There blooms exotic beauty, warm and ſnug,
While the winds whiſtle and the ſnows deſcend.
The ſpiry myrtle with unwithering leaf
Shines there and flouriſhes. The golden boaſt
Of Portugal and Weſtern India there,
The ruddier orange and the paler lime,
Peep thro' their poliſhed foliage at the ſtorm,
And ſeem to ſmile at what they need not fear.
Th' amomum there with intermingling flowers
And cherries hangs her twigs. Geranium boaſts

Her crimſon honours; and the ſpangled beau,
Ficoides, glitters bright the winter long.
All plants of every leaf that can endure
The winter's frown, if ſcreen'd from his ſhrewd bite,
Live there and proſper. Thoſe Auſonia claims,
Levantine regions theſe; th' Azores ſend
Their jeſſamine, her jeſſamine remote
Caffraia; foreigners from many lands,
They form one ſocial ſhade, as if conven'd
By magic ſummons of th' Orphean lyre.

COWPER'S TASK.

# NOVEMBER.

Now the leaf
Inceſſant ruſtles from the mournful grove;
Oft ſtartling ſuch as ſtudious, walk below;
And ſlowly circles thro' the waving air.

As the maturing and diſperſing of ſeeds was a ſtriking character of the laſt month, ſo the fall of the leaf diſtinguiſhes the preſent. From this circumſtance the whole declining ſeaſon of the year is often in common language denominated the *fall.* The melancholy ſenſations which attend this gradual death of vegetable nature, by which the trees are ſtripped of all their beauty, and left ſo many monuments of decay and deſolation, forcibly ſuggeſt to the reflecting mind an apt compariſon for the fugitive generations of

man. This quick ſucceſſion of ſpringing and falling leaves has been thus beautifully applied by Homer.

Like leaves on trees the race of man is found,
Now green in youth, now withering on the ground.
Another race the following ſpring ſupplies,
They fall ſucceſſive, and ſucceſſive riſe:
So generations in their courſe decay,
So flouriſh theſe, when thoſe are paſſed away.
POPE'S HOMER.

The loſs of verdure, together with the ſhortened days, the diminiſhed warmth, and frequent rains, juſtify the title of the *gloomy month of November*: and it ſeems to be felt as ſuch by other animals beſides man.

In penſive guiſe,
Oft let me wander o'er the ruſſet mead,
And thro' the ſaddened grove, where ſcarce is heard
One dying ſtrain, to cheer the woodman's toil.
Haply ſome widowed ſongſter pours his plaint,
Far, in faint warblings, thro' the tawny copſe.
While congregated thruſhes, linnets, larks,

And each wild throat, whoſe artleſs ſtrains ſo late
Swell'd all the muſic of the ſwarming ſhades,
Robb'd of their tuneful ſouls, now ſhivering ſit
On the dead tree, a dull deſpondent flock;
With not a brightneſs waving o'er their plumes,
And nought ſave chattering diſcord in their note.

THOMSON.

Intervals, however, of clear and pleaſant weather occaſionally happen; and in general the autumnal months are, in our iſland, ſofter and leſs variable than the correſpondent ones in ſpring. It long continues

The pale deſcending year, yet pleaſing ſtill.

In fair weather the mornings are ſharp; but the hoar-froſt, or thin ice, ſoon vaniſhes before the riſing ſun.

The lengthened night elaps'd, the morning ſhines
Serene, in all her dewy beauty bright,
Unfolding fair the laſt autumnal day.
And now the mounting ſun diſpels the fog;
The rigid hoar froſt melts before his beam;
And hung on every ſpray, on every blade
Of graſs, the myriad dew-drops twinkle round.

THOMSON.

Sudden

Sudden ſtorms of wind and rain frequently occur, which at once ſtrip the trees of their faded leaves, and reduce them to their ſtate of winter nakedneſs.

O'er the ſky the leafy deluge ſtreams;
Till choak'd and matted with the dreary ſhower,
The foreſt-walks, at every riſing gale,
Roll wide the wither'd waſte, and whiſtle bleak.
THOMSON.

One of the firſt trees that becomes naked is the walnut, which is quickly ſucceeded by the mulberry, horſe-cheſtnut, ſycamore, lime, and aſh; the elm retains its verdure for ſome time longer; the beech and oak are the lateſt deciduous foreſt trees in caſting their leaves: apple and peach-trees often remain green till the latter end of November; and pollard oaks, and young beeches, loſe not their withered leaves, till they are puſhed off by the new ones of the ſucceeding ſpring.

The wood-pigeon, or ſtock-dove, the lateſt in its arrival of the winter birds of paſſage, makes its appearance about the

middle of the month. When pinched by hunger it will eat the young tops of turnips, but beech maſt is its favourite food; and before the old beech woods in the ſouthern parts of the iſland were ſo much thinned, the multitudes of ſtock-doves that annually reſorted thither, probably from Sweden and the north of Germany, were almoſt incredible. They might be ſeen, like rooks, in long ſtrings of a thouſand or more, directing their evening flight to the thick woods, where they were ſhot in great numbers by the fowlers who awaited their arrival.

Salmon begin now to aſcend the rivers in order to ſpawn; they are extremely active fiſh, and will force their way almoſt to the ſources of the moſt rapid ſtreams, overcoming with ſurpriſing agility cataracts and other obſtacles to their paſſage. There are ſeveral *ſalmon leaps*, as they are called, both in Wales, Scotland, and Ireland; at which numbers of fiſh are taken by nets or baſkets placed under the fall, into

into which they are carried after an unſucceſsful leap.

The farmer endeavours to finiſh all his plowing in the courſe of the month, and then lays up his inſtruments till the next ſpring.

Cattle and horſes are taken out of the exhauſted paſtures, and kept in the yard or ſtable. Hogs are put up to fatten. Sheep are turned into the turnip-field, or in ſtormy weather fed with hay at the rick.

Bees require to be moved under ſhelter, and the pigeons in the dove-houſe to be fed.

# DECEMBER.

Oh Winter! ruler of th' inverted year,
Thy ſcatter'd hair with ſleet like aſhes fill'd,
Thy breath congeal'd upon thy lips, thy cheeks
Fring'd with a beard made white with other ſnows
Than thoſe of age; thy forehead wrapt in clouds,
A leafleſs branch thy ſceptre, and thy throne
A ſliding car indebted to no wheels,
But urg'd by ſtorms along its ſlipp'ry way;
I love thee, all unlovely as thou ſeem'ſt,
And dreaded as thou art.

COWPER'S TASK.

THIS month is, in general, the moſt unpleaſant of any in the whole year: the day is rapidly decreaſing, and the froſt being ſeldom fully confirmed till quite the latter end of the year or the commencement of the next, vapours, and clouds, and ſtorms form the only viciſſitudes of weather, thus fully juſtifying the expreſſion in Shakeſpear,

The rain and wind beat dark December.

Every

Every change ſeems only an advance towards the ſtagnation and death of nature, towards univerſal gloom and deſolation.

No mark of vegetable life is ſeen,
No bird to bird repeats his tuneful call,
Save the dark leaves of ſome rude evergreen,
Save the lone redbreaſt on the moſs-grown wall.
SCOTT.

Several of the wild quadrupeds and amphibious animals now retire to their winter quarters, which they never, or but ſeldom, quit till the return of ſpring. Of theſe ſome lay up no ſtores of proviſion, and therefore become entirely torpid till the warm weather brings out them and their food at the ſame time. To this claſs belong the frog, the lizard, the badger, hedge-hog, and bat, all of which feed on inſects or vegetables. The frog ſhelters itſelf in the mud at the bottom of ponds and ditches; the lizard, badger, and hedge-hog, retire to holes in the earth; and the bat makes choice of caverns, barns,

barns, deſerted houſes, and coal-pit ſhafts, where it remains ſuſpended by the claws of its hind-feet, and cloſely wrapt up in the membranes of the fore-feet. Bats, however, are obſerved to be ſtirring at all times of the year, when the warmth of the evening is equal to 50 degrees of the thermometer; and a heat of 45 degrees is found ſufficient to revive the various ſpecies of gnats, which are the favourite food of this animal.

Dormice alſo lie torpid the greater part of the winter, though they lay up conſiderable ſtores of food; an occaſional warm day revives them, when they eat a little, but ſoon relapſe into their former condition.

Squirrels, water-rats, and field-mice, provide large magazines of proviſion, the former of nuts, the others of acorns, potatoes, &c. They are not known to become torpid, though they ſtir but little abroad, and probably ſleep more at this time than in the ſummer.

The

The immediate cauſe of torpidity in animals cannot perhaps be very ſatisfactorily explained; there are, however, certain well-known facts which appear evidently to point out how eſſential a certain degree of cold is to the production of this effect.

If a frog be immerſed in water at 32 degrees, or the freezing point, it becomes perfectly torpid in a few moments; and the gradual application of a warmth of 50 degrees will in a ſhort time reſtore it to a ſtate of activity: in man the effect of immerſion in cold water, and of cold in general, is to render the pulſations of the heart leſs frequent; and if increaſed to a certain degree, to bring on a deep torpid ſleep: in all the known inſtances, indeed, the termination to this ſleep has been death; though reaſoning from analogy, there ſeems no reaſon to ſuppoſe that torpor gradually brought on, and in circumſtances where the body is excluded from a continual change of freſh cold air, ſhould be attended with ſuch fatal conſequences.

The

The only vegetables which now flouriſh, are ſeveral ſpecies of moſſes and *lichens*, or liverworts. The moſſes put forth their minute parts of fructification during the winter months, and offer a curious ſpectacle to the botaniſt at a time when the reſt of nature is dead to him. There are ſpecies of moſſes adapted to every variety of ſituation, but they are very little, if at all, uſed in commerce, domeſtic economy, or as food either for man or beaſt. Lichens cover ditch-banks, heaths, walls, rocks, and other neglected places, with a ſcaly, branched, or leather-like ſubſtance; the different ſpecies of which have been applied to ſeveral important purpoſes. One kind, conſiſting of white flexible branches covering the tops of the higheſt mountains in this iſland, and overſpreading the ſurface of the ground in Norway and Lapland, is called the Rhendeer lichen; from its being the ſole winter ſubſiſtence of the rhendeer, the domeſtic cattle of the Laplanders.

Laplanders. The Iceland lichen, another ſpecies, is uſed when freſh medicinally as a purgative, but when dried is no contemptible ſubſtitute for bread to the inhabitants of the arctic regions: it is mixed with either boiling milk or water, both of which it turns to a thick gruel-like conſiſtence, affording a good deal of nouriſhment. Many kinds are made uſe of as dying drugs, with conſiderable ſucceſs; eſpecially a grey one that is found in the Canary iſlands, known in commerce by the name of archil, and much eſteemed for its rich purple dye, fugitive indeed, but extremely beautiful, and uſed for giving a luſtre to ſilks.

Lichens are alſo of conſiderable ſervice in the economy of nature, in forming upon barren places a ſtratum of vegetable mould for the ſupport of larger and more uſeful plants. If a caſtle or other edifice, by being deſerted and ruined, returns to the dominion of nature, it ſoon becomes covered with the various kinds of lichens,

which

which deriving almoſt their whole nouriſhment from the air and rain will readily grow on a bare rock. After ſome generations of theſe have grown up and decayed, the crevices become filled with a fine mould ſufficient for the ſupport of moſſes and other minute plants. Theſe ſucceſſively decaying add to the collection of earth, which at length ſuffices for the ſupply of a few winged ſeeds of aſh or ſycamore, the minute fibres of whoſe roots inſinuating themſelves into the ſmall interſtices formed by time or the injuries of the weather, derive thence freſh nouriſhment, and by their gradual enlargement at length ſplit in pieces and overthrow the moſt maſſy towers.

On the 21ſt of December happens the *winter ſolſtice*, or ſhorteſt day; when the ſun is ſomething leſs than eight hours above the horizon even in the ſouthern parts of the iſland. Soon after this, froſt and ſnow generally begin to ſet in for the reſt of the winter. The farmer has little

to

to do out of doors in the courſe of this month. His principal attention is beſtowed on the feeding and management of his cattle, and various matters of houſehold economy.

The feſtival of Chriſtmas occurs very ſeaſonably to cheer this comfortleſs period. Great preparations are made for it in the country, and plenty of ruſtic dainties are provided for its celebration according to the rites of antient hoſpitality. The old year ſteals away unlamented and ſcarcely perceived; and a new one begins with lengthening days and brighter ſkies, inſpiring freſh hopes and pleaſing expectations.

Theſe naked ſhoots
Barren as lances, among which the wind
Makes wintry muſic, ſighing as it goes,
Shall put their graceful foliage on again,
And more aſpiring, and with ampler ſpread,
Shall boaſt new charms, and more than they have loſt.
Then, each in its peculiar honours clad,
Shall publiſh even to the diſtant eye
Its family and tribe. Laburnum rich

In

In ſtreaming gold; ſyringa iv'ry-pure;
The ſcented and the ſcentleſs roſe; this red
And of an humbler growth, the other tall,
And throwing up into the darkeſt gloom
Of neighbouring cypreſs or more ſable yew,
Her ſilver globes, light as the foamy ſurf
That the wind ſevers from the broken wave,
Althea with the purple eye, the broom
Yellow and bright as bullion unalloyed,
Her bloſſoms, and luxuriant above all
The jaſmine, throwing wide her elegant ſweets,
The deep dark green of whoſe unvarniſh'd leaf
Makes more conſpicuous and illumines more
The bright profuſion of her ſcattered ſtars.
Theſe have been, and theſe ſhall be in their day,
And all this uniform uncoloured ſcene
Shall be diſmantled of its fleecy load,
And flush into variety again.

COWPER'S TASK.

## On the SUN's Paſſage through the SIGNS of the ZODIAC.

THE *Zodiac* is an imaginary broad circle in the heavens, within which all the planets have their paths. The central line of this circle is called the *Ecliptic*, or apparent path of the ſun in its annual courſe. It is, however, the *real* path of the earth, as viewed from the ſun. The zodiac is divided into twelve parts of 30 degrees each, called *ſigns*, from the cluſters of ſtars, or conſtellations, through which it paſſes. Theſe ſigns have all been diſtinguiſhed by imaginary figures, which are traced out upon the celeſtial globe, and which give name to them. They form, therefore, an aſtronomical calendar of 12 ſolar months, which in the following manner correſpond with the common reckoning of the months.

The

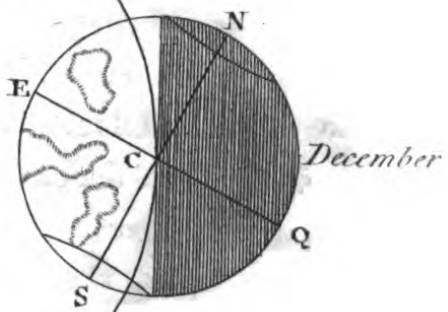
The Sun enters into

| | |
|---|---|
| ARIES, or the *Ram* - - - | March 20. |
| TAURUS, or the *Bull* - - | April 19. |
| GEMINI, or the *Twins* - - | May 21. |
| CANCER, or the *Crab* - - | June 22. |
| LEO, or the *Lion* - - - - | July 23. |
| VIRGO, or the *Virgin* - - | Auguſt 23. |
| LIBRA, or the *Balance* - - | September 23. |
| SCORPIO, or the *Scorpion* - | October 23. |
| SAGITTARIUS, or the *Archer* - | November 22. |
| CAPRICORNUS, or the *Wild Goat* | December 22. |
| AQUARIUS, or the *Waterer* - | January 19. |
| PISCES, or the *Fiſhes* - - | February 18. |

THE END.

## EXPLANATION OF THE PLATE.

Let S repreſent the ſun; A B C D the earth's orbit; N S her axis: E Q the equator; and the figures diſtinguiſhed by the months March, June, September, and December, four different poſitions of the earth in her annual motion round the ſun. In conſequence of the inclination of the earth's axis, which is always directed to nearly the ſame point in the heavens, and is therefore always nearly parallel to itſelf in every part of the earth's orbit round the ſun, it will appear, that in the months of March and September the terminating circle of light and darkneſs on the globe will paſs through the two poles, producing equal day and night in all parts of it, which ſeaſons are called the vernal and autumnal equinoxes. But in the month of June, at the time called the ſummer ſolſtice, the terminating circle leaves the north pole a great way in the light, and the ſouth pole equally in darkneſs, thereby producing ſummer, or long days, to all the parts of the northern hemiſphere; and winter, or ſhort days, to all thoſe of the ſouthern. In December, or at the winter ſolſtice, on the contrary, the north pole is in darkneſs, and the ſouth pole in light; conſequently the ſeaſons in each hemiſphere are the reverſe of the former ſtate.


N
E
C
December
Q
S