

understand, then, why December was depicted by the poets down to the time of the change of style as a colder month than we now find it. It belonged to a colder part of the year, just as Spenser's "Merry Month of May" belonged to a warmer part of the year than our present May.

Those who quote the accounts which have been handed down of bitter winters in past time have been apt to overlook the circumstance that those accounts nearly always tend to disprove, not to establish, the theory of change. Those records tell us of the exceeding severity of cold which prevailed at such and such a time, but they also tell us that the cold was altogether exceptional. Sometimes even we find that while the *maximum* degree of cold recorded has fallen short of what has been experienced within the last 20 or 30 years, it is described as exceeding aught that even the oldest persons could remember. Gilbert White speaks of the cold in December, 1764, as very extraordinary, but he mentions one degree below zero as the lowest temperature recorded out of doors in the shade. In January, 1855, a temperature of four degrees below zero was recorded in the neighbourhood of London. One circumstance, indeed, which White mentions, would seem to show that cold such as we had in January, 1855, was regarded as his day as too improbable to be worth considering in making thermometers, for he says that a thermometer by Martin, a well known maker of scientific instruments, was graduated only down to four degrees above zero, so that the mercury sank quite below the brass guard of the bulb. Again, in describing the severe weather of January, 1776, when the Thames was frozen over, both above and below the bridge, White tells us that during the four coldest nights the thermometer at South Lambeth fell to 11, seven, six, and six (above zero), and at Selborne sank on one night exactly to zero; but he adds that this was "a most unusual degree of cold for the south of England." It was the long continuance of the frost of 1776, not its intensity, which caused the effects to be so remarkable. The snow lay 26 days on the houses in the city, being all that time perfectly dry, so that the snow in the streets "crumbled and trode dusty, and, turning gray, resembled bay salt." The long continuance of the frost depended on the long continued northerly winds. At any time we might have a similar experience. We have been so far fortunate that for many years it has never chanced to blow continually from northerly quarters for three or four weeks in January, the coldest month in the year. And we may safely conclude, from long experience, that such a continuance of northerly winds at that season is improbable. But there is no reason why it should not happen now as in 1776 and other past years. It was as little anticipated in the first week of 1776 as in the first week of 1870. Their experience was as ours has been. "The oldest housekeepers living," White tells us, "did not remember" a frost which had lasted (continuously) so long as that of January, 1776.

Forty or fifty years ago those who believed that a great change had in the course of a generation or so affected winter weather in Great Britain were at loss to explain the greater mildness of the season. In the United States and Canada, where a similar change was, quite erroneously, believed to have occurred, a cause was imagined in the clearing of forests and the consequent exposure of large tracts of land to the sun's rays. But in Great Britain and in Europe generally there had been no clearing away of millions of acres of timber. So that a writer in 1837 admitted, "if the Climate of Great Britain has actually undergone a change, the cause, whatever it may be, must be of a different nature from

that generally supposed to affect the climate of North America." The imagined change in the last 40 years has been attributed to a cause, which, perhaps, has some real effect on the climate relations, though certainly no such effect as has been attributed to it—the enormous annual consumption of coal. It is possible that in manufacturing towns and in the larger cities, the mean temperature of the winter months may be slightly increased in this way; though there is no valid evidence to show that this is the case, and any increase must be very small. That the climate of the country should be influenced by the consumption of coal is altogether incredible. Only a portion of the heat resulting from the use of coal in this country tends to warm the air, directly or indirectly. Most of it is or ought to be expended in generating various forms of force. But even if all the coals raised annually were used to increase the warmth of our air, the effect would be very slight by comparison with the heat received from the sun. The combustion of four times as many tons of coal as are annually raised in Great Britain would barely suffice to dry the island after one day's heavy rainfall, if we could imagine it used in that way.—*The London Times*.

CLOUD BANDS IN THE PLANET MARS.—On this subject Captain J. N. M. writes: "In your article on the discoveries of Signor Schiaparelli in the planet Mars, it is stated that during last January and February, he has been able to observe and map out in more than twenty instances duplicates of the dark streak covering the equatorial region of Mars, with a mysterious network to which there is nothing remotely analogous on the earth," permit me to say that during the last twenty years I have repeatedly pointed out that our own cloud bands assumed this identical form. Take the following extract from "Winds and their Courses," page 90—an extract from my own log—of what I saw off the Cape of Good Hope, and is simply a description of what I have since observed in nearly every part of the globe: "There were two distinct series of belts of clouds. In no case did a belt perform a complete circuit. East of the centre their contact formed a dense mass of cumulus and nimbus, whilst westward from it the clouds were beautifully interwoven, forming a sort of net work." Now these crossings and network formations often cover spaces of from 600 to 1,000 square miles, and as the cloud bands are often exceedingly dense, with bright spaces between them, it follows that, if an observer could be placed in Mars or in the moon, with a good telescope looking down upon the earth, he would see the long dark lines and network precisely similar to those seen in Mars. I have repeatedly pointed out to friends this beautiful arrangement of what may be called our permanent cloud bands. I was under the impression that the earth enjoyed a monopoly of such arrangements; but this is evidently not so."—*London Daily Telegraph*, April 1882.

A Rainy Day.

A wind that shrieks to the window pane,
A wind in the chimney moaning,
A wind that tramples the ripened grain,
And sets the trees a-groaning!
A wind that is dizzy with whirling play,
A dozen of winds that have lost their way
In spite of the others calling,
A thump of Apples on the ground,
A flutter and flurry and whirling round
Of leaves too soon a-dying;
A tossing and streaming like hair unbound
Of the willow boughs a-flying:
A lonely road and a gloomy lane,
An empty lake that is blistered with rain,
And a heavy sky that is falling.

Robert K. Weeks.

CALENDAR FOR THE FLOWER, FRUIT AND VEGETABLE GARDEN.

August.

Flower Garden.—But little deviation is required from the instructions for July.

Fruit Garden.—Strawberries that have fruited will now be making "runners" or young plants. These should be kept cut off close to the old plant, so that the full force of the root is expended in making the "crowns" or fruit-buds for next season's crop. If plants are required for new beds, only the required number should be allowed to grow, and these should be layered in pots, as recommended in July. The old stems of raspberries and blackberries that have borne fruit should be cut away, and the young shoots thinned to three or four canes to each hill or plant. If tied to stakes and topped when four or five feet high, they will form three or four branches on a cane, and will make stronger fruiting plants for next year.

Vegetable Garden.—How deeply such crops as cabbage, cauliflower and celery. The earthing up of celery this month is not to be recommended. Onions in many sections can be harvested. The proper condition is when the tops are turning yellow and falling down. They are dried best by placing them in a dry shed in thin layers. Sow spinach for fall use, but not yet for the winter crop. Red top, white globe and yellow Aberdeen turnips should now be sown, rutabaga turnips sown last month will need thinning, and in extreme Southern States they may yet be sown.

Take precautions during August for a considerable amount of rain-fall and cool to cold and frosty nights, particularly between 15th and 20th and 25th to 28th of month.

Hail storms are likely to be of sudden and frequent occurrence and glass frames and glass houses should have matting prepared for speedy use.

Wind storms will probably be above the average.

In the tobacco sections of Virginia, stormy and cool weather is probable between the 15th and 20th and 27th and 28th of month.

The warmest portion of August is likely to occur between the 22nd and 25th days.

Mix a little carbonate of soda with the water in which flowers are immersed, and it will preserve them for a fortnight. Common saltpetre is also a very good preservative.

Take a new flower pot, wash it clean, wrap it in a wet cloth, and set it over butter; it will keep it as hard as if on ice. Milk if put into an earthen can, or even a tin on, will keep sweet for a long time if well wrapped in a wet cloth.

THE CUCUMBER BEETLE.—The larva or grub of this beetle (*Diabrotica vittata*) bores into the lower part of the stem just beneath the lower part at the surface of the ground, while the perfect insects or beetles attack all tender parts of the vine above the ground. Many remedies have been recommended for this insect, among which powdered plaster of Paris sprinkled over the vines is a favorite with some. This sometimes keeps the beetle from the tops, but has no effect on the grubs at the roots. If the hills are boxed with boxes open at the top, and this covered with gauze, the bug can not get to the vines. Persian insect powder or pyrethrum sprinkled over the vines when wet is perhaps the best remedy. If applied when the vines are young, before blossoming, and continued after every shower or every week, especially on the main vines and about the roots, no eggs will be laid, and, of course, no grubs will kill the vines.