



Lovers of Open Fields

FLOWERS of late summer and autumn are predominantly those of the open field and roadside, in contrast to the woodland blossoms we all think of first in connection with spring.

You can make the test yourself. Go out and ask the first friend you meet to name a flower that is in bloom right now. The chances are he will say goldenrod, or wild aster, or sunflower, or perhaps he may remember that despised "donkey's lettuce," the thistle. Flowers of the open, every one. The odds are a hundred to one he won't think of a summer or autumnal woodland flower—he may not even know the name of one. Yet if you had put him to the same test in spring he would surely have answered violet, or trillium, or hepatica, or bloodroot, or spring beauty, and would not have remembered any of the spring flowers that grow in the open.

There is a reason for this, of course. There is an actual scarcity of summer-flowering plants in the woods. In early spring, before the leaves are thick on the trees, plenty of sunlight filters down through their branches to encourage the rich flower population that stars the ground between their trunks. But after the forest canopy has closed itself, only plants that can tolerate deep shade (and they are not many) will consent to bloom. Hence we must turn to the lusty brotherhood in gold and blue that rejoice in the midsummer or early autumnal sun that floods the prairies.

This color contrast between the earlier and later flowers is another noteworthy thing. The colors of early spring flowers are predominantly white and the more delicate tints: white hepatica, white bloodroot, white Dutchman's-breeches, light-blue or amethystine

anemone, blue phlox, pink geranium. There are exceptions, of course—the bold red of the columbine or the indigo of the spiderwort, for example—but on the whole the spring fashions of flowerdom demand pastel effects.

Contrast this with the strong yellows and blues that paint the late-summer landscape: goldenrod and wild aster, sneezeweed and thistle, sunflower and ironweed, cassia and verbena, rosinweed and wild bergamot.

Science News Letter, September 3, 1932

PLANT PATHOLOGY

Sick Vegetables Described In New Publication

THE U. S. Department of Agriculture has issued two new booklets with colored pictures of sick vegetables. These are intended for the guidance of market inspectors, dealers and all persons concerned with the handling of potatoes, tomatoes, peppers and egg-plants. They show and describe the typical symptoms of the fungous and bacterial spoilages that attack these vegetables, as well as insect and other animal injuries and some of the "physiological" diseases.

The authors are Dr. George K. K. Link, professor of plant pathology at the University of Chicago, and Dr. Glen B. Ramsey, senior pathologist of the Office of Horticultural Crops and Diseases, with headquarters at the University.

Science News Letter, September 3, 1932

GEOLOGY

Swelling Marble Makes Trouble in Quarries

MARBLE that swells when the first cuts or drill holes are made in it has been causing trouble in several quarries at Pittsford and South Wallingford, Vt. The spontaneous expansion of the rock is sufficient to bind drills while they are making holes, and suddenly developing fissures have thrown machines weighing a ton off their tracks.

The phenomenon has been studied by George W. Bain of Amherst, Mass. In a report to the *Journal of Geology*, he states his opinion that the marble was placed under pressure many thousands of years ago during a period of mountain formation, and that the recent cuttings by the quarrymen have given it the first chance to expand in ages.

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