BOTANY

NATURE RAMBLINGS

Bloodroot

➤ A GOOD theme for a botanist-poet might be supplied by the bloodroot, which now stars our woods. Such a one might well hail the little white flower as a "modest poppy" that

"Crowds back its carmine blushes to its root
And turns toward all ardors of the sun
A front demure and white as any nun."

For the bloodroot is really a close cousin of the poppy, and the red that its relative flaunts on its face, this little white spring blossom expresses only in its blood-red sap. It would not be exactly correct, however, to say that the red sap is found in its root, for the thick underground part of the plant is really a rhizome or subterranean stem, from which the true roots, as well as the overground stems, take their rise.

Few wild flowers are more lovely than the bloodroot, *Sanguinaria canadensis*. It grows in rich, shady woods, on rocky hillsides, in thickets and on waste lands over most of the United States east of the Rocky Mountains. Only fleeting enjoyment, however, comes from its golden-centered, poppy-like blossoms, since the snow-white petals show themselves for just two or three April or May days before departing.

The sap of the subterranean stem is somewhat thick and milky under its red color, which is another point of kinship with the milky-juiced poppy tribe. And as the juice of the poppy contains a poisonous principle used in medicine, so also does the juice of the bloodroot. Under the Latin name Sanguinaria, the dried rhizome used to find a more or less prominent place on druggists' shelves, though it is little used now.

The bloodroot is one of the small number of native American wildflowers that needs little warning against reckless bouquet-gathering, due again to that same thick, red, rather irritating juice.

Children picking flowers in the woods sometimes take a handful of its attractive, though short-lived white flowers; but the appearance of their hands and dresses usually causes their alarmed mothers to place further bloodroot gathering under stern injunction.

Science News Letter, April 30, 1955

AERONAUTICS

Downtown Heliports Seen

➤ COMMERCIAL DOWNTOWN heliports which may spring up in every large city in the country will probably be on the ground and smaller than a city block.

Assuming that helicopters of the future will not vary radically from present-day models, the field should measure about 200 by 400 feet. Except for parking room, most of the heliport area is set aside for emergency landing space. Rooftop heliports are undesirable, Horace Brock, executive vice president of New York Airways, Inc., told the meeting of the Society of Automotive Engineers in New York.

They would not only raise the operating altitudes, which would present flying difficulties in bad weather, but would add problems with elevator service, baggage and fuel handling.

Corrosion of the helicopter and problems in transporting baggage and passengers make operation from water also "very undesirable."

The ideal city heliport would have a wide unobstructed street-level approach. Stationing the field near railroad yards, parks, ponds, waterways, or widely divided highways would permit this ease of approach.

Midtown heliports would not be undesirable because of noise or gusts since the helicopter engine is not loud and not of an annoying pitch. The downwash dissipates quickly. But the ports should be dust free and shelter areas should be provided for visitors and passengers.

Suburban heliports of the future will probably be found near parking lots, filling stations, post offices, resorts and large factories.

The potential use of such a network of heliports was pointed up in another paper presented by Grahame H. Aldrich, director of special projects for the Air Transport Association of America.

Approximately 89% of all intercity traffic, he said, is for distances less than 250 miles per trip. In 1954 there were 444,000,000 such passengers in the United States. This is the potential market for helicopter travel.

Helicopters will probably carry from 35 to 50 passengers plus baggage and cargo.

Today the only midtown heliport operating day and night is in Trenton, N. J. In this respect, the U. S. is far behind Europe, in which there are seven such heliports with one more under way in Paris.

Science News Letter, April 30, 1955

PSYCHOLOGY

Scales Help Salvage From "Human Scrap Pile"

➤ SALVAGE OF the mental patients now pushed onto the "human scrap pile" of the closed, back wards of mental hospitals will be aided by two scientific devices reported to the Eastern Psychological Association in Philadelphia.

Two rating scales will spot among the little known and often forgotten men and women those who will respond to special treatment well enough so that they can be discharged from the hospital. The scales correctly pick three-fourths of those who respond to treatment. They also mark as "poor risks" three-fourths of those who actually fail to benefit from the special treatment.

The new scales were reported by Drs. F. Harold Giedt and Richard Sanders of the Veterans Administration Hospital, Perry Point, Md.

Science News Letter, April 30, 1955

MEDICINE

Cancers Need More Protein Builders

➤ DISCOVERY THAT cancers need three more protein-building amino acids than the nine required by the human body for its growth was announced by Dr. Harry Eagle of the National Institutes of Health, Bethesda, Md.

The extra requirement is for the growth of human cancer cells in tissue culture outside the body.

Normal cells from mouse connective tissue also need the extra three amino acids.

Besides giving a lead to more knowledge of the basic differences between cancer cells and normal cells, the findings, reported at the meeting of the Federation of American Societies for Experimental Biology in San Francisco, are expected to help in the use of tissue cultures for growing viruses, such as the polio virus, outside the body.

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