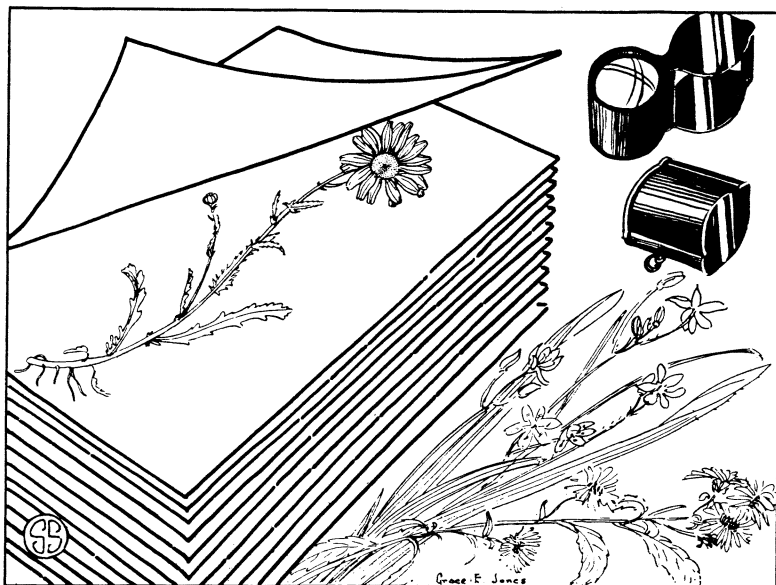


Inexpensive Summer Fun

Pressed Flowers Are Popular For Nature Collections

(Second of a series of 12 articles. Next week—Collecting Leaves)



PRESS FLOWERS DRY

Do the work as soon after picking as possible; otherwise they will wilt and will not look well after they are pressed. In preparing them for pressing, lay them out as naturally as possible. The small doublet magnifier (upper right) will add to the joys of collecting by opening a whole new world to your view.

FLOWERS, pressed and carefully kept, probably represent the most nearly universal of all kinds of nature collecting. The practice ranges all the way from a single rose between the leaves of a book of verses, redolent of romance long ago, to the millions of sheets of botanical specimens garnered from the ends of the earth into the barn-like lofts of the great scientific herbaria.

In between these extremes is the hobbyist's summer collection of pressed plants. It is a fascinating and healthful hobby, costing little or nothing to start, and it may eventually lead to more serious undertakings. Many a famous botanist has begun his career as a youngster flattening flowers in an old book or thick magazine.

It is quite possible to make a collection with no other equipment than the traditional old book, but better results can be had (and at no greater expense) with a little different kind of equipment. And for the beginner, this equipment

has the added interest of being exactly the same thing that is used by professional botanists everywhere.

The essential parts of the flower-collector's kit are sheets of newspaper. The standard-size newspaper page, folded across its middle, just as it is delivered on your doorstep, is exactly the same size as the cardboard mountings and manila folders in the great herbaria. A

Books

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specimen laid out and pressed in a newspaper-sheet folder is of just the right size and in the right condition to go into a permanent scientific collection.

So the first thing you do is tear up a lot of old newspapers and lay the sheets out, folded separately.

When you bring in your plants from your field trips, lay each one out, in as natural-looking a position as possible, in one of these folders. Small plants may be put several in a folder, but they should not lie across each other, and plants of two different kinds should not be put into the same folder. Keeping species separate to begin with will save the time and trouble of re-handling later.

The folders should not be stacked one right on top of the other. They won't dry out nice and flat that way. The best thing to do is to get some sheets of blotting paper of the same size (the kind used on top of desks) and alternate blotting sheets and folders with plants in them. But if you haven't the money to spend on blotting sheets, use six or eight empty newspaper folders between each two filled ones.

Then put a board or a light frame of wood or other material (you can easily make one out of the side of an orange crate) on top of your pile of folders, load it with stones or bricks, and let it alone for a few days while the plants dry. When you take them out, lay your

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Please send me **Bulletin 2** containing additional information about collecting wildflowers and your list of books and leaflets on the subject.

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● Earth Trembles

Information collected by Science Service from seismological observatories and relayed to the U. S. Coast and Geodetic Survey resulted in the location of the following preliminary epicenters:

Friday, June 10, 1:06 p. m., E.S.T.

On coast of the state of Oaxaca, Mexico. Latitude 16.4 degrees north, longitude 98 degrees west.

Wednesday, June 15, 2:43.8 a. m., E. S. T.

Off the coast of central Chile; a fairly strong shock. Latitude 31 degrees south, longitude 72 degrees west.

Thursday, June 16, 10:15.2 a. m., Manila Time
Near southern Japanese islands; a strong shock. Latitude 27 degrees north, longitude 127 degrees east.

For stations cooperating with Science Service in reporting earthquakes recorded on their seismographs see SNL May 21.

folders on a shelf, or in a large flat box, for permanent keeping.

Plants should be as newly picked as possible when they are put into the folders for pressing. They will then lie more naturally, and make better-looking specimens. Wilted plants are harder to arrange, and don't look well after they are pressed. If the plant is not too big it should be whole, including both flowers and at least part of the root. If necessary, bend the stem to make it fit into the folder.

While you can make your pressing equipment out of materials that don't cost you a cent, as we have seen, there is one item you should get if you can possibly scrape up the money. That is a good magnifying glass. Not the big kind with a handle, which old people use for reading fine print, but the smaller kind with two lenses at opposite ends of a cylinder, that swings into a frame to protect it when not in use. This kind of magnifier is called a doublet.

Every boy and girl should carry a doublet magnifier, just as he (or she) should have a pocket-knife. These lenses are highly useful not only for examining the fine hairs, veins, etc., on plants, but for looking at a thousand other things. With a doublet you open up a whole new world in your everyday surroundings, that you have never before seen.

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apparently interested first in what we now know as protozoa, one-celled primitive animals, for he devotes a great deal of space to descriptions of their appearance and behavior. They are larger and livelier than bacteria, and therefore easier to observe. But that he saw bacteria there is no doubt.

On the third page of the letter to

the Royal Society, he describes the gradual disappearance of a certain kind of microscopic animals over a period of about two weeks. But as the first animalcules dwindled in numbers he notes the appearance of smaller creatures: "I now saw some few animalcules, so small that even through my microscope they almost eluded the eye. And I stopped my observations."

To this, Dr. Cohen appends the remark, "Bacteria, together with protozoa, are doubtless referred to here."

A little further along, describing what he saw in water in which he had soaked some whole peppercorns, Leeuwenhoek writes more in detail.

"The fourth sort of animalcules, which floated about amongst the other three sorts, were incredibly small; indeed, so small, in my sight, that I judged if all 100 of these very small animalcules were stretched out against one another, they would not reach the length of a coarse sand-grain. This being true, then ten hundred thousand of these living creatures should not be able to fill the volume of a coarse sand-grain.

"I discovered yet a fifth sort which had about the thickness of the last-mentioned animalcules, and which were about twice as long."

These "animalcules," Dr. Cohen notes, were "evidently bacteria."

In this very simple language, then, is recorded a hobbyist's discovery of a class of organisms that play vastly important roles in human sickness and health, in farming and industry—invisibly small yet potently great lives that determine the way the whole world runs.

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METEOROLOGY

Weathermen Should Make Greater Use of Clouds

See Front Cover

WEATHERMEN are commonly supposed to go out on the roof, take a look at the clouds, and come back in to tell us what the weather's going to be tomorrow. But really they don't use clouds nearly as much as they should, Prof. Charles F. Brooks of Harvard University indicated before the meeting of the American Meteorological Society.

Forecasters in the United States, excepting only the ones on the Pacific Coast, have the advantage of having a whole continent at their backs, with a good telegraphic network to let them

know where storms are and in what direction they are moving, Prof. Brooks said. Hence they depend very much on this "synoptic" service and tend to neglect the cloud-watching that would help them to improve their score of correct forecasts.

Local weather-watchers base their forecasts almost entirely on their knowledge of cloud behavior, Prof. Brooks pointed out. With sufficient experience, such an observer can make forecasts for from six to twelve hours ahead with better success than a meteorologist who depends entirely on telegraphic reports. But if the meteorologist were to combine a study of the telegrams with judicious cloud-watching he could excel the local weather prophet in both range and accuracy.

Clouds can be useful to students of the weather in other ways, too, Prof. Brooks stated. Their formation and behavior, their direction and rate of travel, can be read by one who has the scientific background in terms of wind direction and velocity, temperature and humidity aloft, and the arrival of polar and tropical air masses.

The illustration on the front cover of this week's SCIENCE NEWS LETTER shows a weather man at Mt. Washington Observatory measuring the rate of travel of the beautiful clouds above him.

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PSYCHIATRY

Currents From Eyes May Aid Study of Brain Ills

MINIATURE electric currents that accompany eye movements can be "tapped," amplified and used to aid in the study of certain abnormal brain conditions by a new method reported by Dr. Ward C. Halstead, staff member of the Otho S. A. Sprague Memorial Institute in the division of psychiatry of the University of Chicago Clinics.

Location of brain lesions, which has been facilitated previously by the tapping of the electric currents from the brain itself, known popularly as brain waves, may also be aided by the study of the eye currents, it is hoped.

The new method is especially adapted to the study of mental disease patients, Dr. Halstead said (*Journal of Psychology*) because with it reliable records can be obtained while the subject is walking about. Records can also be made when the patient's eyes are closed, and an attempt will be made later to measure eye movements in this way while the subject is asleep.

Science News Letter, June 25, 1938