



Preformed Flowers

► THE RICH dower of beauty with which our woodlands present us each spring is no improvisation of the moment. It was all carefully prepared and laid by during the preceding summer and early autumn, in bulb and corm and rootstock underground, in well-protected buds on woody twigs of tree and shrub and vine. At least the beginnings of the flowers were ready before the first frosts stopped further growth; in many species well-advanced details of petals and stamens and pistil were present in the tightly-packed, tucked-away buds.

This can readily be demonstrated by carefully prying the tough scales off the fat buds of a lilac or similar flowering shrub, perhaps soaking the twig in warmish water for a half hour first, to soften it up. Patience, a good needle, and preferably a hand lens are all the equipment required. Beneath the bud-scales you will find a pair of tightly-folded little leaves, and within these the flower-cluster, tiny but unmistakable, looking like a bunch of almost microscopic green grapes.

If you want to find the flower-beginnings in a non-woody plant, the best

thing to work on is a dormant bulb of a hyacinth, tulip or the like. A thin, sharp knife is needed for this kind of dissection—and discerning eyesight as well, for the telescoped embryo flower structures are all of the same pallid juiciness as the bulb-scales themselves. But with patience, and a few discarded bulbs on which to practice, you can find the parts all there.

It is quite natural, of course, that the first flowers should be these preformed ones, laid down months before and ready to go into action when the right conditions of temperature, light and moisture give the signal. Annual plants, that grow anew each year, must take time to sprout from the seed, get their roots into the ground and their tops into the sunlight, and prepare the necessary reserves of foodstuffs, all before the serious and rather costly business of flower formation can be under-

taken. That is, at the shortest, a job requiring several weeks of the most diligent kind of growth. If flowers are to bloom in April and May, this preliminary work must be taken care of by the preceding August or September at the latest.

Many, perhaps most, of the perennial plant species that grow in lands where seasonal temperature differences are marked definitely require a more or less pronounced chilling before they will arouse out of their autumnal dormancy and go on into bloom. Some require a hard freeze, followed by a thorough warming-up. Others will respond to just a touch of frost and relatively little heat. Flowers of this latter kind (peach, for example) are what give orchardists premature gray hair by constantly offering to pop into premature bloom during mild winters.

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ETHNOLOGY

Prehistoric Contact

► EARLY INDIANS of the lower Mississippi Valley may have had direct connections with Indians on the east coast of Mexico, Dr. William Duncan Strong, Director of the Ethnographic Board of Smithsonian Institution, stated in an address before the Washington Academy of Sciences.

Pottery unearthed in both areas, in excavations directed by Dr. Gordon Eckholm of the American Museum of Natural History, is decorated with similar patterns of broad, grooved, incised lines. However, Dr. Strong pointed out, as the pottery found in Mexico dates back to approximately 300 A.D. and that found in the United States is placed at approximately 1000 A.D., it indicates an 800-mile, 700-year migration of the Indians from Tampico, Mexico, to Louisiana. Most of the other significant Mexican evidence of this relationship has

long since decayed in the humid climate.

The oldest Indian culture yet unearthed in Chile and the coast of Peru—a simple fishing population which preceded the agricultural and horticultural civilizations—was also described by Dr. Strong. Fishhooks, bowls cut from lava, barbed harpoons with stone points finely flaked by pressure, and coarse percussion-flaked stone tools made by banging one stone against another to rough-shape the instrument, remain to tell of the customs of this prehistoric people. Junius Bird of the American Museum of Natural History, with Dr. Strong, brought this evidence to light in the course of a year of intensive excavation, Dr. Strong said.

“The great vistas in time and space revealed by the present program of intensive research and excavations make it abundantly clear that the field of Middle and South American archaeology is rapidly ripening, with a promise of rich scientific harvest. It has always been a field of superlative prehistoric interest, but only recently has scientific work been envisaged on sufficiently broad and clean-cut lines to give definite promise of more sweeping and valid culture-historical results,” Dr. Strong predicted. “There seems little doubt that when the blight of the present war is removed this type of research work will surge forward in all the American republics.”

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