ARBORICULTURE

Seventy-Five Arbor Days

By setting out young trees, children will celebrate Arbor Day, 75 years old on April 10 this year. It was started by Julius Sterling Morton.

➤ ARBOR DAY, observed annually by thousands of school children who set out young trees to grow up with themselves, will see its seventy-fifth anniversary on April 10 of this year. On Jan. 4, 1872, the Nebraska state legislature, spurred by tree-loving Julius Sterling Morton, set aside April 10 as the first Arbor Day, offering prizes for the largest number of trees properly planted on that day.

In 1885, the Nebraska legislature changed Arbor Day to fall on Mr. Morton's birthday, April 22. Dates of observance in other states necessarily vary according to the planting season, being as a rule earlier in the South than in the North. The Arbor Day idea has spread outside the United States, and has taken hold in countries as far apart as New Zealand and Spain.

Sterling Morton, as he was usually called, was born in New York and educated in Michigan, but migrated to the then new Territory of Nebraska in 1854, when he was 22 years old. The poverty of the prairie country in trees, and the resulting inconveniences suffered by the settlers, impressed him greatly, and with all the enthusiasm of youth he began his crusade for growing crops of trees.

He led the way by personal example, planting in the new-turned prairie soil every kind of tree seedling and cutting he could get. He used a small newspaper which he owned as a pulpit to spread his gospel. He insisted on proper planting and year-round care. When he was called to Washington in 1893 as Secretary of Agriculture in President Cleveland's cabinet, he continued to agitate for tree planting in the East as he had in the West.

Arbor Day has been made so largely a school celebration primarily to impress upon the new generations of citizens the need for more trees and more knowledge about trees. However, since the actual plantings made by pupils in school can hardly be more than tokens, the real responsibility for large-scale plantings that will really restore some measure of America's once great wealth in trees must continue to rest with owners of lands capable of producing mass timber crops.

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GEODESY

Tube Measures Levels

➤ NEW INFORMATION about the Gulf Stream could be obtained if a slender tube filled with water were laid like a submarine cable under the narrowest part of the Straits of Florida, through which pours the current that eventually becomes the famous "river of the sea". This suggestion is made by Dr. R. B. Montgomery of the Woods Hole Oceanographic Institution in *Nature* (March 22).

Such a water-filled tube, less than a half-inch in diameter, has already been used in Denmark for measuring the comparative heights of points on land on opposite sides of a strait. The method was originated by Dr. N. E. Norlund of the Danish Geodetic Institute at Copenhagen.

The operation of this device depends on the principle known as the hydrostatic balance, taught in every high-school physics course. Essentially, this principle is that the level of a liquid in two arms of a U-shaped tube is always the same, no matter how far apart they are. Of course, when the ends are miles apart, measurements have to be corrected for differences in temperature and barometric pressure when really precise levels are to be determined.

What would be demonstrated by the use of a Norlund tube under the Straits of Florida is the degree of piling-up on shore of water pushed through in the swift current, Dr. Montgomery states.

The Norlund tube is particularly useful in determining true heights of points on land above sea level. There is a great deal of difference between the theoretical mean sea level and what an observer actually sees if he takes his instruments down to the shore and tries to make measurements. Currents, tides, winds and other factors always make differences in water level at different points along any shoreline, and these are apt to be especially marked along the opposite shores of channels. So it is simpler to shut a column of water away from these disturbances by isolating it in a tube and thus establishing a true hydrostatic balance.

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