



Gum-Trees

EVERYWHERE in the world where the white man has gone, he has given the name "gum" to some kind of tree or other, often without regard to whether the tree thus designated contains any kind of gum. In Australia and New Zealand the eucalypti are "gums," and settlers in certain parts of Australia pridefully call themselves "gumsuckers." In our own country there are several trees, most remotely related to the antipodean genus, that are also called gums.

They grow principally in the South, with extensions of their bailiwick northward and westward at least as far as the Great Lakes. One, perhaps the most familiar, is the so-called sweet-gum, or liquidambar. Its star-shaped leaves and spiky fruits make the tree a most picturesque one, especially when the first cool weather of autumn has turned its foliage to a rich red wine-color.

Quite as numerous, however, and fully as worthy, are the Nyssas, known variously as black-gum and sour-gum. There are two principal species, one a dweller in swampy flatwoods by preference, the other usually found on moist but well-drained hillsides. These trees have lance-shaped leaves, of a rich glossy green that shines strongly in the sunlight. Their fruits are sure identification marks: slender stems, each with twin berries about the size of cherry pits, somewhat oval in shape, turning purplish black as they become ripe.

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Dictionary makers have to pass upon about 3,000 new words every year, deciding whether or not to admit the newcomers to the "American" language.

CHEMISTRY

Intensely Sweet Substance Insipid After Splitting

A NATURAL substance 300 times sweeter than cane sugar, rivalling some of the coal-tar products of chemical laboratories, has been shown by two French chemists to consist of a chemical union of common glucose and another compound which has little or no taste. United, they are intensely sweet; divided, they are not even as sweet as ordinary sugar.

The compound bears the chemical name "stevioside," because it occurs in a South American plant known to botanists as *Stevia*. The plant itself was first introduced to the scientific world about the beginning of the present century; it is a close relative of such familiar North American weeds as boneset, Joe-Pye-weed, and the plant that causes occasional outbreaks of milk sickness in the Midwest. After its discovery by Europeans it rapidly acquired the name of "the sweetest plant in the world." A very small piece sufficed to sweeten a cup of coffee or tea.

During the past generation several partially successful attempts have been made to isolate and study the particular substance in the plant that made it so intensely sweet. It has remained, however, for the French chemists, MM. Briddel and Lavielle, to accomplish the final purification.

They have discovered, to their sur-

prise, that the sweet crystals of stevioside, upon chemical treatment to remove a part of the combined water in them, break apart into about 60 per cent. common glucose and 40 per cent. of a new stuff which they called "steviol." The latter has no taste, but combined with the glucose it produces a most poignantly sweet substance.

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PSYCHOLOGY

Hands of Idiot Children Cleverer Than Their Heads

TO SAY that an idiot child has a mental age of two years or three years is somewhat misleading, it appears as a result of a comparison made at the Training School at Vineland, New Jersey, by Dr. Edgar A. Doll and Cecelia G. Aldrich between the abilities of idiot children and of normal infants of the same mental age.

Although the total mental test scores of the idiots and the infants with whom they were compared came out about the same, the individual abilities and disabilities were very different. All tests involving language ability put the idiot children at a disadvantage, but tests requiring manual dexterity showed the idiots to be superior in this respect.

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