

eye disease develops. This vitamin is also considered necessary for normal functioning of the mucous membrane of nose, throat and breathing apparatus, and urinary and gastro-intestinal tracts. In this connection it has been claimed that vitamin A prevents colds.

It is in its effect on the mucous membrane of the stomach that Dr. Manville believes vitamin A is concerned in the formation of stomach ulcers. According to modern theory, stomach ulcers are formed when the acid normally present in the stomach is able to penetrate the lining of the stomach and so eat away part of the stomach wall. It is considered not so much a question of too much acid in the stomach as of a lessening or absence of factors that normally neutralize the acid.

In Dr. Manville's opinion, the mucous lining of the stomach acts as a protective device against the acid's action. Since vitamin A is necessary for the well-being of this mucous lining, he reasoned that ulcers might develop when the vitamin was lacking in the diet. Investigations with animals fed on diets that had little or no vitamin A seem to have borne out his theory.

Science News Letter, July 8, 1933

SOCIOLOGY

Values of Family Life In Soviet Challenged

THE "COLLECTIVIZED" family, common to apartment-housed American industrial communities and the deliberately planned Soviet social system, was sharply challenged by Dr. Dwight Sanderson of Cornell University in a discussion before the American Sociological Society.

"Will the Russian peasant ever obtain the personal satisfactions and advantages under the factory system of a collectivized farming, living in rural apartment houses with common eating rooms, that the American farm family has on its own homestead?" Dr. Sanderson demanded. "If efficiency and industrial output are the criteria, the Russian or the industrial system may be vindicated, but if human values are primary, it is desirable to determine by strictly scientific methods what human values are obtained by the more traditional type of family life and to what extent it may abdicate its former functions without thereby destroying its essential values."

Science News Letter, July 8, 1933

BOTANY

Big Tree of Tule Re-examined; Claimed as World's Greatest

THE OLDEST living member of the plant or animal kingdom, and therefore the oldest living thing in the world, as far as is known, is a cypress tree in the Indian village of Santa María del Tule, a few miles east of the City of Oaxaca in Mexico. This is the opinion of Dr. Herman Von Schrenk, consulting timber engineer of St. Louis, Mo., who, during a recent visit to Oaxaca, made a second study of the giant tree. The first was made just thirty years ago by Dr. Schrenk.

Dr. Schrenk believes the age of the Tule tree not less than 4,000 years, and bases his estimate on a boring he has just taken, with the permission of the Mexican Ministry of Agriculture, out of another giant cypress in the railroad yards at Oaxaca City. The ring count of the boring showed the second tree about a thousand years old, and by comparing its size with that of the Tule tree, Dr. Schrenk was convinced that the latter was at least 4,000 years old. The boring showed the Mexican cypress, or ahuehuete, as the Indians call it, to be of extremely slow growth.

The Tule tree is about 140 feet high, and 24 men can span it with their arms, its circumference being about 117 feet at 40 inches off the ground. But the true circumference is hard to measure because of the great unevenness of the

trunk, which is far from being a true cylinder. This unevenness has caused many persons to believe that the tree is really three trunks grown together instead of one. But most botanists who have viewed it, admitting that this cypress can thus fuse its trunks and even branches, say that the Tule tree is really a single trunk, and that such unevenness is a characteristic of the species.

Like the Florida swamp cypress, the Tule tree loves water. The studies of Cosiano Canzatti, an Italian botanist long resident in Oaxaca, show that it is supplied by streams flowing underneath the roots. Geologists believe the valley in which the Tule tree stands was once a lake district, and that the water went almost to Mitla, ancient Zapotecan capital some 30 miles east of Oaxaca City. According to Indian history, too, lakes once filled the three-armed valley of Oaxaca, and these were drained a century before America was discovered, by Zapotecan engineers who widened a cut existing at the end of the southern branch of the valley.

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Cellophane cloth, made by fixing a layer of cellophane against a fabric backing, is a new shiny material for such things as book covers, shelf linings, costumes, and window displays.



OLDEST LIVING THING

is this cypress tree near Oaxaca, Mexico, which is probably not less than 4,000 years old.