



### THE MIGHTY FALLEN

*This great sequoia tree of the Yosemite, so huge that stage-coach horses have been stabled in a burned-out place in its base, has at last succumbed to the flames that wounded it more than 200 years ago. The man pictured standing on the trunk seems Lilliputian beside the bulk of its roots.*

### BIOCHEMISTRY

## Find New Rickets-Preventing Substance Not Vitamin D

VITAMIN D is not the only thing that can prevent rickets. A new rickets-preventing substance which is not vitamin D and which differs from the vitamin somewhat in chemical composition has been reported by Prof. Lester Yoder of the Iowa State College and Iowa Agricultural Experiment Station (*Science*, Oct. 26).

The new substance has the long chemical name of cholesterilene sulfonic acid. Its rickets-preventing power has been determined in laboratory experiments, but it is not at present being put forward as a substitute for vitamin D. In fact, in order to protect the public from such substitution before more is known about the effect of the new substance on the body, Prof. Yoder proposes to take out patents on it.

Scientific interest in the new substance lies in its chemistry. It is made from cholesterol, a fatlike substance found in bile and egg yolk and other animal tissues. Vitamin D is made from ergosterol, a chemically related sub-

stance. Ultraviolet light activates ergosterol to produce vitamin D. Fuller's earth activates cholesterol to produce the new anti-rachitic substance. The activating constituent of the fuller's earth in this case was found to be sulfuric acid or its anhydride.

In the early days of vitamin research, the rickets-preventing power of vitamin D was thought to be caused by cholesterol, but scientists soon found that this power was lacking in pure cholesterol and only present when that substance was contaminated by ergosterol and that the vitamin was formed by activation of the contaminating ergosterol. More recently Drs. F. C. Koch, E. M. Koch, and I. K. Rugins, of the University of Chicago, reported that provitamin D could be formed from cholesterol itself as well as from ergosterol. Dr. Yoder's work has confirmed this and shown the chemistry by which a rickets-preventing substance may be formed from cholesterol.

*Science News Letter, November 3, 1934*

### DENDROLOGY

## Big Tree 2,000 Years Old Crashed After Windstorm

MIGHTY even in its overthrow, one of Yosemite's Big Trees, estimated to be nearly 2,000 years old, lies stretched along the ground in Mariposa Grove.

The old sequoia, widely known as the Stable Tree because of a great burned-out place in its base in which horses were stabled in stage coach days, was 269 feet high and 29½ feet in diameter at its base.

The fall of the Stable Tree is attributed by park authorities to the great fire scar which had burned out its center more than two hundred years ago, greatly weakening its hold in the ground. A recent windstorm loosened the giant's already weakened foothold and two days later, during a period of absolute calm, it toppled over and measured its length on the ground.

Although it struck with tremendous force, the huge trunk remains unshattered for three-quarters of its length, breaking off only at the top. Every branch, some of them three feet thick, snapped off close to the trunk. A great crater was left where the roots had been.

*Science News Letter, November 3, 1934*

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