

## SCIENCE NEWS

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## PRODUCTION OF VITAMIN C IN THE USSR

THE chief shop of a Soviet vitamin factory that produces the anti-scurvy vitamin C is situated in a woods which formerly attracted attention only from casual holiday-makers who came to pick wild nuts. In these Zakatalsk forests thick growths of nut trees spread over a distance of about 10,000 acres.

Nature has endowed these nuts, protected by a thick shell, with rare qualities which medicine has searched for in many fruits and plants. Both the flesh and the shell contain large quantities of vitamin C, or ascorbic acid as it is known chemically. Formerly the fruit of the wild rose was considered to have a larger content of this vitamin than any other plant growing in the USSR. To-day unripe walnuts have taken first place in the table of raw materials containing vitamin C.

The vitamin C content of lemons, oranges and tangerines is between one fortieth and one fiftieth that of Zakatalsk nuts. During a short period in spring and summer the walnuts are saturated with the vitamin, which forms from 1.5 to 3 per cent. of the weight of the entire nut. The first experiments on these nuts were made in Azerbaijan before the war and now a large vitamin factory has been built there.

A concentrate of the vitamin from the nuts is prepared by a very simple process. The nut in which a cut has been made is washed in several waters during which it easily parts with the vitamin it contains. The only rule in this step is to keep a strict watch on the temperature and to make sure that the raw material is kept in a hermetically sealed vessel.

The juice obtained from the unripe nut, however, is unbearably bitter and this gave the greatest difficulty in making use of the walnut supply of vitamin C. The experimenters frequently gazed sadly at the bottles containing the scurvy-curing and -preventing liquid which, however, could not be used in that form.

Then a second process was worked out and a way was found by which the bitter juices of the nuts were refined and the taste changed to one more palatable.

This new sort of vitamin C is used chiefly in hospitals and military units.—Y. GIK, Moscow.

## ITEMS

A WIRELESS dispatch from Moscow states that seven hundred Soviet naturalists are studying new methods of utilizing for the war new minerals, unused edible and medicinal plants, new raw materials of animal origin and the problems of agriculture, particularly in the eastern regions of the USSR. This special commission of the Moscow Naturalists Society has held over sixty conferences in the past year. Another activity is the compilation of a Who's Who of Soviet botanists which will contain 4,000 names.

THE great fire-ball of August 18 that streaked across Indiana and Ohio in daylight has had its path traced,

thanks to about 150 reports sent in by readers of newspapers served by Science Service. Dr. Charles P. Olivier, director of the Flower Observatory, Upper Darby, Pa., president of the American Meteor Society, has traced its path back to near the Indiana-Ohio border southeast of Portland, Ind. The meteor exploded over Wabash County, Ill., at a height of 10 to 20 miles. Fragments seem to have gone considerably farther and meteorites or "stones from heaven" should be sought in that region. Loud sound effects are reported. A smoke train, along the latter part of the path, lasted fully 10 minutes and drifted southward. Any one in southeastern Illinois who saw the object in the sky about 8:15 A.M., CWT, on August 18, who has not yet reported his observation is urged by Dr. Olivier to do so in order that more accurate and complete heights and orbit can be determined. The height and rate of drift of the smoke train are of great value since this information will give facts about the upper atmosphere that can be obtained in no other way.

THE comet reported by a New Zealand astronomer was bright enough to have been seen with the naked eye by many soldiers in the Southwest Pacific. When discovered on September 13, it was of the fifth magnitude and therefore could be seen without the aid of a telescope. The comet was spotted near the southern constellation of Volans, the flying fish, by D. C. Berry, director of the comet section of the New Zealand Astronomical Society. News of its discovery was forwarded from Carter Observatory at Wellington, New Zealand, to the Harvard College Observatory. The right ascension of the comet when found by Mr. Berry was seven hours, 40 minutes, and its declination negative 75 degrees. The comet, which had a short tail of less than one degree, was moving eastward at the rate of 22 minutes a day, and northward with a speed of three degrees, 12 minutes.

PATENTS with tonsillitis will recover at least one day sooner than they otherwise would if they are given sulfa drugs in small doses, it appears from a report in the *Journal* of the American Medical Association by Captain Edward D. Freis, of the Army Medical Corps. Considering the numbers afflicted with tonsillitis every winter, the saving of even one day in hospitalization has much economic and military importance. The report is based on studies of 405 young men of military age. One group of 100 had their throats sprayed with salt solution. Another 100 had sulfanilamide powder sprayed on their throats every two hours in addition to the salt solution spray every four hours. A third group of 115 got salt solution spray and sulfadiazine pills four times a day. The remaining 90 had their throats sprayed with microform crystals of sulfadiazine. The last group recovered fastest, but the difference from those of the other sulfa-treated groups was not great. Because it is easier to give the drug in pills than by spray, Captain Freis calls this the "ideal" treatment procedure. No toxic or sensitization reactions occurred in any of the sulfa-treated patients.