



Symbol of Union

INDEPENDENCE Day used to bring a great outburst of oratory in praise of the American Eagle. Perhaps it still does, but nobody listens to a Fourth-of-July orator any more now; it is too easy to turn the dial and shut him off. Anyway, the eagle long ago established his solid claim in American heraldry, and flaps his wings triumphantly on our national currency and seals.

Most nations have a flower as well as a national bird or beast. The United States is one of the few that has never found the plant that best expresses its national spirit and sentiments. Among those that have been proposed, and for which their advocates are still claiming primacy is the goldenrod.

The goldenrod has much to recommend it. Its plummy head is made up of many smaller units, giving botanical point to the national motto: "E Pluribus Unum." It is exceedingly hardy, resisting cold, drought and all kinds of adversity. It grows throughout a wide stretch of our territory; though some states are quite without it, and these are naturally among the most vigorous protestants against goldenrod as a national emblem.

One objection is most unfairly advanced against the goldenrod. Somehow a most persistent and hard-to-kill superstition has arisen that this fine yellow flower is responsible for hay fever. The experiments of numbers of careful and critical medical scientists have failed to show that goldenrod pollen has anything to do with ordinary hay fever. This is caused by non-showy weeds that come into flower during goldenrod season; and thus the goldenrod gets the blame for the mischief these lurkers do.

Science News Letter, July 4, 1942

MEDICINE

Penicillin Stops Germ Growth At Dilution of 1:12,000,000

English Scientists Have Now Obtained Highly Purified Effective Preparation in Form of Its Barium Salt

THE REALLY terrific germ-blitzing power of penicillin, one of medicine's newest weapons against disease germs, appears in a report by Dr. E. P. Abraham and Dr. E. Chain, of the University of Oxford, to *Nature* (March 21).

Penicillin is extracted from a mold not unlike the molds that grow on bread, cheese and sausage. The English scientists report they have now obtained a highly purified preparation of penicillin in form of its barium salt. This preparation is able to stop completely the growth of *Staphylococcus aureus*, the kind of germ that causes boils, carbuncles and the like, in a dilution of one part in 12,000,000.

"Penicillin," they state, "must therefore be regarded as one of the most powerful antibacterial substances with predominantly bacteriostatic action known."

Scientists hope to get a preparation of penicillin so pure that it will form crystals. The job of determining its chemical composition and then, perhaps, of finding a way to manufacture it on a large scale as the sulfa drugs are now produced, will be speeded, once crystal-pure penicillin is obtained.

Penicillin has already, in experimental work with patients, proved a safe and effective weapon to use against germ diseases. Widespread use of it depends on discovery of a way to produce large amounts of it, either from the mold itself or by chemical means. It was discovered by Prof. A. Fleming of St. Mary's Hospital, London.

Science News Letter, July 4, 1942

New Germ Remedy

FROM a different kind of mold, *Aspergillus clavatus*, Dr. B. P. Wiesner, of the Royal Northern Hospital, London, reports in *Nature* he has discovered still another potent germ remedy.

Small quantities of this substance stop the growth of *Staphylococcus aureus*, while larger quantities kill these germs within a few hours in test tube experiments.

Active concentrates were given without harm to mice, to healthy human subjects and to patients. This newest germ-killer from germs has not been known long enough for much study on its ability to protect humans against germs, but already it has shown it can check germs that resisted some of the sulfa drugs and mandelic acid. It has the advantage of exerting its anti-germ power in the presence of blood serum, pus and urine.

Science News Letter, July 4, 1942

MILITARY SCIENCE

Color Guard in Review Depict Spirit of 1942

See Front Cover

THE ILLUSTRATION on the front cover of this week's SCIENCE NEWS LETTER is an official photograph from the War Department. It shows our colors passing in review at an outpost "somewhere" where America's soldiers are now ready to do battle to preserve the liberties of which July 4 reminds us.

Science News Letter, July 4, 1942

Sugar shortage will step up Canadian honey business this year, and the Canadian National Express already has reservations to transport 100,000,000 bees; most of which come from Georgia and Mississippi.

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