

## —Dietz on Science— TINY MICROBES' POWER SECRET IS IN NUMBERS

Bacteria Thousands Could  
Be Placed in Line One  
Inch Long.

BY DAVID DIETZ  
Scripps-Howard Science Editor

Every one knows that microbes are very small, but it is doubtful if many have any notion of their exact size.

Bacteriologists, to simplify their statistics, have invented their own standard of length for measuring germs. It is known as the "micron," and in scientific literature is indicated by the Greek letter "mu," the equivalent of our "m."

An average sized bacterium is about one micron in length. A micron, we should like to add, is approximately 1-25,000th of an inch. It is exactly 1-1,000th of a millimeter.

However, microbes vary greatly in size. Professor Stanhope Bayne Jones points out in his newly published "Man and Microbes" that there is far greater variety in size among microbes than human beings.

### Marvel at Smallness

"Giant and pygmies are more nearly of a size than some of the giant microbes and their tiny associates," he writes.

"Every one who has worked with microbes has marveled at the smallness of their size and has tried to compare familiar objects with them."

"This usually leads to the ridiculous use of figures which once ended with the statement that if all the statisticians were laid end to end it would be a very good thing, indeed."

Nevertheless, Professor Bayne-Jones proceeds to give us a statistical comparison himself.

He asks us to imagine 25,000 soldiers drawn up in a single rank with an allowance of eighteen inches for each man. This would form a line about seven and one-fourth miles long.

### Equals Weight of Water

"Suppose next," he says, "that some omnipotent general officer from headquarters should command 'Dwindle' and that, at the word of command, each soldier would shrink to the width of an average bacterium, one micron, and close up to his neighbor."

"Their line would then be about one inch long."

"Twenty-five thousand typhoid germs could lie comfortably side by side in an inch."

In general, a microbe weighs just a little more than a drop of water of the same volume, Professor Bayne-Jones continues.

This means that it would take 833,000,000 microbes each with a volume of one cubic micron to weigh one milligram.

This number would have to be multiplied by 28,300 to get the number of bacteria needed to weigh an ounce. (There are 28,300 milligrams in an ounce.)

Microbes weigh so little more than water because about 80 per cent of the bulk of a microbe is made up of water.

It is astonishing, Professor Bayne-Jones tells us, how little solid matter there is in a microbe. "The figures show that a living germ is not apt to need a great bulk of food," he adds, "and they give us a hint that microbes must depend upon numbers to do the tremendous thing they accomplish."

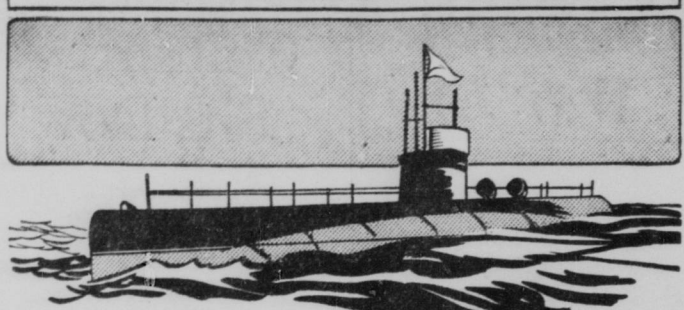
### LENTEN SPEAKER HERE

Evanston Minister to Conduct Services at Christ Church.

Noon-day Lenten services this week at Christ church will be conducted by the Rev. Harold L. Bowen, rector of St. Mark's church, Evanston, Ill. His first sermon will be given Tuesday noon.

He will speak each following day of the week except Saturday.

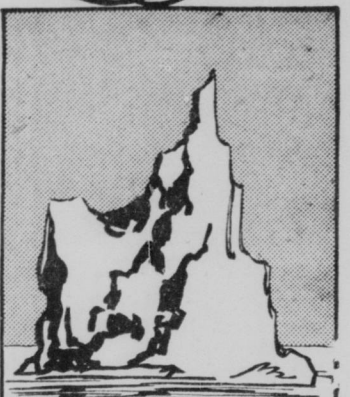
## — THIS CURIOUS WORLD —



**GERMANY.**  
WHOSE SUBMARINE SUCCESSES SHOCKED THE WHOLE WORLD IN THE GREAT WAR, HAD NO FAITH IN SUBMARINES AT THE TIME THE WAR BEGAN, AND WAS COMPLETELY UNPREPARED IN THIS RESPECT.



**THE CALIFORNIA SOAP PLANT**  
DEVELOPS AN UNDERGROUND BULB WHICH MAY BE USED AS A CAKE OF SOAP.



**ICEBERGS**  
ARE CONTINUALLY TURNING OVER, AS UNEVEN MELTING CHANGES THE CENTER OF GRAVITY.

THE NORTH ATLANTIC is the only area where icebergs offer a serious menace, although a few Antarctic bergs do invade the ship lanes on the western side of Cape Horn, South America. In the North Pacific few icebergs ever get to the open sea, most of them breaking up in the bays where they were set adrift.

### NEXT—What bird sits down?

There are about 217,000 Indians in the United States.

## PARTY SOLIDLY BEHIND REPEAL, M'NUTT ORDER

Every Loyal Democrat to  
Back Platform Pledge,  
Governor Declares.

"Both the state and national Democratic platforms called for repeal of the eighteenth amendment and it is logical that the party organization should work for that end."

That is the program laid down by Governor Paul V. McNutt, who has established a unique record by forcing the legislature to carry out every platform pledge.

Perhaps for the first time in Indiana political history, a party enacted its platform into law, it is pointed out.

So, when Arthur Branham, Monroe county Democratic chairman, charged Sunday that he was ousted as automobile license plate distributor because he was working against repeal, he was telling at least a "half truth," McNutt forces admitted today.

The other half is that Branham was an appointee of Secretary of State Frank May Jr., is charged with failing to keep a promise made to the McNutt faction and forced to pay the penalty by forfeiting all patronage.

Branham joined forces with the Republican county chairman to work against repeal.

Dr. William Lowe Bryan, president of Indiana university, where McNutt was dean of law, is to be one of the dry delegates.

The regular Democratic organization is expected to oppose election of all dries and back the wet side in the election, set tentatively for June 6.

It is this "party responsibility" that also is being used to explain why the monopolistic imported beer

## IN LINE FOR U. S. JOB



Walter J. Cummings, Chicago utilities magnate, is under consideration for the post of assistant secretary of the treasury. There are three such posts, each in charge of important functions of the department.

permits have been awarded as Democratic plums.

One of the McNutt leaders explained it this way:

"Although the Republican party platform in Indiana called for repeal of the eighteenth amendment, the politicians in their campaign fell back on their old dry support—the Anti-Saloon League, the W. C. T. U., and the like."

"The huge Democratic majority in both houses repealed the Wright 'bone-dry' law and passed the beer control bill. They kept their platform pledge and assumed responsibility."

"Isn't it logical, therefore, that since they are taking the blame for making Indiana wet, they should receive any benefits which might occur?"

"If they turned the control over to Republicans, they might purposely mess it up so that they could blame the Democrats and win the next election."

## WAR VETERAN CUT SCHEDULE AWAITED HERE

Ale Unable to Determine  
Effect Until Study of  
President's Order.

Until the entire text of the veterans "economy" edict if the President is in the hands of John H. Ale, manager of the regional division of the United States veterans' bureau, he will not be able to determine the effect on the local hospital or affairs of the regional office.

The regional offices, in all probability, would be combined with other offices in some centrally located city, as Chicago or the work done direct from the veterans' bureau in Washington, it is said.

"The new rating schedule for disabilities, hospitalization and pensions should arrive from Washington by Wednesday or Thursday. It will be Monday before we will be able to put the new ratings into effect to determine their meaning to Indiana," Ale said.

Any order to close the local hospital is not expected for several months.

"The Washington offices of the bureau will want time to study the economy act before closing hospitals," Ale said.

The Cold Springs road hospital is

**NOTICE:**  
During 1933 the following low prices will prevail on Mayer's line

**WATCH REPAIRING**

MAINTENANCE .....  
CLEANING .....  
JEWELS .....  
WATCH HANDS, 15c

99c

All Watches Taken Apart When Cleaned. Not Dipped. We do only first-class work.

**MAYER INC.**  
42 W. WASHINGTON

considered a field station and the economy act of President Roosevelt makes it possible to close the field stations in the nation.

The fact that the Indianapolis hospital, which houses the regional offices, is a government-owned building on ground donated to the veterans bureau by the city may keep the institution from being closed hastily.

But local hospital officials believe that should the new structure be shut, that it would be kept in condition for use as a soldiers' home or hospital in the future.

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## WOMAN KILLED IN MYSTERIOUS BLAST

Rear of Portland Home Is  
Demolished in Tragedy.

By United Press

PORTLAND, Ind., April 3.—Mrs. Clara Gregory, 55, was killed instantly early today when a mysterious gas explosion demolished the rear of her home here.

Relatives found the body clothed in a night dress. They were unable to explain her presence in the kitchen long before her usual hour for arising.

## Good News for Women Who Suffer

Lydia E. Pinkham's Tablets Relieve and  
Prevent Periodic Pain.

A Scientifically Prepared, Clinically Tested Woman's Medicine; No Dizziness, No Ill Effects.

Most women still suffer more or less from periodic disturbances . . . cramping pains, sometimes so severe that they are forced to stay in bed . . . sick headache, nausea, backache, blue spells . . . general discomfort which interferes with their activities.

Perhaps they think there is no help for such conditions but they are wrong.

Take Lydia E. Pinkham's Tablets three or four days beforehand and notice the difference. They do far more than simply dull the pain temporarily. They help to correct the cause of the pain, and so prevent its return. If you take these tablets regularly, and if yours is not a surgical case, you may expect to obtain permanent relief. Clinical tests prove it.

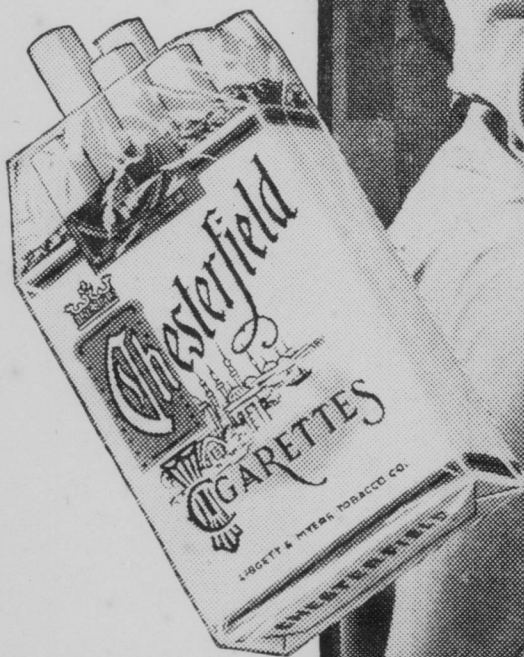
These tablets are chocolate coated and pleasant to take. They will not cause dizziness or any unpleasant effects.

Ask for the new size . . . a convenient tin box which sells for 50c. The larger size is packed in glass bottles. Sold by druggists everywhere. Don't delay. Give these remarkable tablets a chance to help you as they have helped others.

LYDIA E. PINKHAM'S TABLETS

Then  
Satisfy

..all you  
could  
ask for!



Just two  
words...

Yes, I have heard about two words; and now and then three words—but "They Satisfy" means "To gratify fully."

Why do these two words "they satisfy" fit Chesterfields? Because Chesterfield Cigarettes are milder. Because Chesterfield Cigarettes taste better.

Chesterfield's way of blending and cross blending fine Turkish and Domestic tobaccos brings out better flavor and aroma.

They Satisfy!

## You'll be singin' while you shave

HERE'S good news, men, that you've been waitin' for a long, long time. BARBASOL put an end to the messy shaving brush. Now it improves the quality of your razor blade. Fine tool steel plus careful workmanship—that's the combination that makes shaving as easy as rollin' off a roof. These blades are made by the oldest tool-makers in America. They are sharp as a surgeon's scalpel. Every one is keen as Einstein's mind.

Just put one of these new blades in an old three-post holder and turn it down. Now shave. You've never known anything like it. If you've mislaid your three-post razor, never mind. You can get a brand new one from BARBASOL together with five of these new blades for only 35¢.

**BARBASOL  
BLADES** 5 for 25¢  
hold their temper

Chesterfield  
the cigarette that's Milder  
the cigarette that Tastes Better