

### WHAT SCIENCE HAS DISCOVERED ABOUT YELLOW FEVER

ITS GERM WAS ISOLATED BY AN ITALIAN BACTERIOLOGIST, MEANS TO PREVENT SPREAD OF THE DISEASE

THE sudden appearance of yellow fever in the United States this summer and the death of many people in the City of New Orleans, the cause of the disease in the Crescent City, causes general interest in the dreaded "yellow plague."

New Orleans and Memphis have, for the past 100 years, been the chief sufferers from this disease. Many other Southern cities have also been sorely afflicted with the terrible scourge.

In 1899 there was a general outbreak of yellow fever in the South, and Secretary of the Treasury Gage issued an abstract of a report of medical experts who were appointed by the President and instructed to investigate the cause of the disease and its etiology.

**Yellow Fever Germ.**  
The commission consisted of Surgeons Wadsworth and Giddings, two experts, who were detailed to make the investigation.

The report embodies the work of the commission in fairly testing the claim of Professor Sanarelli, of Bologna, Italy, that the bacillus icteroides is the cause of yellow fever, and the conclusion is drawn that this famous scientist has isolated the true cause of the scourge. The conclusion is based upon a careful and scientific study, in a well-equipped laboratory in Havana, of 22 cases of disease thought to be yellow fever by the native physicians in attendance.

Of the 14 cases diagnosed as yellow fever, the commission isolated the organism of Sanarelli, the bacillus icteroides, from 13, and in the case in which this organism escaped the observation of an independent observer for whom tube cultures were taken at a necropsy conducted by the commission. Thus the even percentage of isolations has been obtained in these 14 cases, all of which exhibited prominent symptoms of the disease. In the cases not thus diagnosed the organism of Sanarelli was not obtained.

From the living blood in 12 of the 14 cases, abstracted not earlier than the third day of the disease, the organism was isolated, and in the two others it was obtained post-mortem. The commission, having preserved a number of cultures made at the isolation hospital in the City of New Orleans from cases seen during the epidemic of 1897, also isolated therefrom the bacillus icteroides in the proportion of 83.3 per cent of the cases examined, the cultures having been taken at a necropsy. Thus the identity of the bacillus icteroides of our Southern States with that found in Cuba and that sent the commission by Professor Sanarelli, which was obtained in South America, was established.

**Study of the Germ.**  
The commission also examined 31 unknown dead bodies found in Cuba, and in all cases wherein the death had been caused by disease other than yellow fever none of Sanarelli's organism was discovered. Many experiments were made with animals and the natural history of the newly discovered germ was studied. It was found that when animals were placed under natural conditions of infection the test proved conclusively the natural specificity of the organism of Sanarelli.

The theory formulated and expressed by Surgeon-General Sternberg, that the "germinal principle" in yellow fever was to be looked for in the alimentary tract, an opinion evidently dependent upon the well-known influence of the disease upon the organs adjacent and contributive to this tract and portions of the tract itself, as the duodenum, has been found to be correct by the commission, since there is no record of anyone ever having isolated the specific germ from the canal save its presence there through the capillary hemorrhage into its lumen.

The influence of the various disinfecting agents on the bacillus icteroides has been studied from the point of view of the practical advantages to be derived from a better acquaintance with the organism, and it is found that the mechanical and chemical agents in ordinary use. Cold, however, is not used in this process, for the organism resists the most extensive refrigeration, and no reliance can be placed on this mode of disinfection. On the other hand, the organism is very susceptible to dehydration, and cannot withstand artificial drying for more than 10 to 15 days, and it is very probable that the reason for its death is due to the lessened humidity of the atmosphere at such seasons, rather than to the degree of cold experienced. Sunlight is very fatal to this organism, and no doubt is more so if the organism has lost its vitality through evaporation of its fluids, as in a frosty atmosphere.

**Important Conclusions.**  
The conclusions of the commission are as follows, and are regarded as being of great importance by the medical world, and may result in the production of an antiserum which will give a potent cure for and preventive of the disease.  
1. That the micro-organism discovered by Professor Giuseppe Sanarelli, of the University of Bologna, Italy, and by him named "bacillus icteroides," is the cause of yellow fever.  
2. That yellow fever is naturally infectious to certain animals, the degree varying with the species; that in some rodents local infection is very quickly followed by blood infection, and that, while in dogs and rabbits there is no evidence of this subsequent invasion of the blood, monkeys react to the infection in the same manner.  
3. That infection takes place by way of the respiratory tract, the primary colonization in this tract giving rise to the earlier manifestations of the disease.  
4. That in many cases of the disease, probably a majority, the primary infection or colonization in the lungs is followed by a "secondary infection," or a second colonization of this organism in the blood of the patient. This secondary infection may be complicated by the simultaneous passage of other organisms into the blood or this complication may arise during the last hours of life.  
5. That there is no evidence to support the theory advanced by Professor Sanarelli that this disease is primarily a septicaemia, inasmuch as cases do occur in which the bacillus icteroides cannot be found in the blood of organs in which it might be deposited therefrom.  
6. That there exists no causal relationship between the bacillus "X" of Sternberg and this highly infectious disease, and that the bacillus "X" is frequently found in the intestinal content of normal animals and of man, as well as in the urine and the bronchial secretion.  
7. That, so far as your commissioner is aware, the bacillus icteroides has never been found in any body other than one infected with yellow fever, and that whatever married does not prevent his being carried and that other micro-organisms, it is characterized by a speciality which is distinctive.  
8. That the bacillus icteroides is very susceptible to the influences injurious to animal life, and that its ready control by the processes of disinfection, chemical and mechanical, is assured.  
9. That the bacillus icteroides produces

in vitro, as well as in vivo, a toxin of the most marked potency, and that, from our present knowledge, the only available and reasonable possibility of the ultimate production of an antiserum more potent than that of Professor Sanarelli.

**Mosquito the Sinner.**  
A year or so ago Dr. Walter Reed, surgeon in the United States Army, published an account of a careful study of yellow fever by himself and other Army officers. The report says in part:

"The mosquito serves as the intermediate host for the parasite of yellow fever, and it is highly probable that the disease is only propagated through the bite of this insect."

This conclusion is regarded as of high importance in the medical profession, particularly as the Army surgeons had an excellent opportunity to study the disease last summer during the fever epidemic at Quemados and among the patients in Las Animas Hospital, Havana. The discovery of Dr. Reed and his assistants will be of great help in fighting the disease.

The Army surgeons say that they were influenced to give their attention to the theory of the propagation of yellow fever by means of the mosquito—a theory first advanced and ingeniously discussed by Dr. Carlos J. Finley, of Havana, in 1881 . . . by reason of the well-known facts connected with the epidemiology of this disease, and, of course, by the brilliant work of Ross and the Italian observers, in connection with the theory of the propagation of malaria by the mosquito."

A feature of the report of the medical officers is that Dr. Jesse W. Lazear, one of their number, developed a fatal attack of yellow fever from a mosquito bite, and that Dr. James Carroll, another member of the special board, was stricken with the fever through the medium of the insect, but recovered.

**One Actual Test.**  
In Dr. Lazear's case he had been bitten on August 16 by a contaminated mosquito of the genus fatigans variety, but no appreciable disturbance of health followed the inoculation. On September 13, while Dr. Lazear was collecting blood from yellow fever patients for study in Las Animas Hospital, he was bitten by a culex mosquito, whose variety has been undetermined.

As Dr. Lazear had been previously bitten by contaminated insects without after effects, he deliberately allowed this particular mosquito to remain till it had satisfied its hunger. Five days after the bite Dr. Lazear was taken ill with progressive and fatal yellow fever and died on September 25.

The board's comment in this case is: "As Dr. Lazear was bitten by a mosquito while in the city of Havana, the yellow fever hospital, one must at least admit the possibility of this insect's contamination by a previous bite of a yellow fever patient."

Dr. Carroll was bitten by a mosquito, culex fasciatus, on August 27. This particular mosquito had bitten two severe and two mild cases of yellow fever before attacking Dr. Carroll. Five days after being bitten Dr. Carroll was down with severe yellow fever, from which he recovered.

**Conclusions of Surgeons.**  
The medical officers say in concluding their report:  
"For ourselves we have been profoundly impressed with the mode of

infection and with the results that followed the bite of the mosquito in these three cases. Our own observations appear to throw new light on Carter's observations in Mississippi as to the period required between the introduction of the first (infecting) case and the occurrence of secondary cases of yellow fever."

"Since we here, for the first time, record a case in which a typical attack of yellow fever followed the bite of an infected mosquito, within the usual period of incubation of the disease, and in which other sources of infection can be excluded, we feel confident that the publication of these observations must excite renewed interest in the mosquito theory of the propagation of yellow fever, as first proposed by Finley."

"From the first part of our study of yellow fever we draw the following conclusions:  
1. The blood taken during the life from the general venous circulation, on various days of the disease, in 18 cases of yellow fever, successively studied, has given negative results as regards the presence of bacillus icteroides."  
2. Cultures taken from the blood and organs of 11 yellow fever cadavers have also proved negative as regards the presence of the bacillus icteroides."  
3. Bacillus icteroides (Sanarelli) stand in no causative relation to yellow fever, but when present, should be considered as a secondary invader in this disease."  
4. From the second part of our study of yellow fever we draw the following conclusions:  
5. The mosquito serves as the intermediate host for the parasite of yellow fever, and it is highly probable that the disease is only propagated through the bite of this insect."

**Wood's Feat at Havana.**  
General Leonard Wood stamped out the yellow plague at Havana, after it had been carrying thousands to the grave for hundreds of years. His watchword was sanitation. These facts are an open book to the American people.

In this generation we consider yellow fever as a plague habit to carry the Gulf states only, but epidemics of the disease in the North are not unprecedented. In 1793 Philadelphia had a visitation of yellow fever, the effect of which was more appalling than that of any modern epidemic. The Summer of 1792 had been unusually hot and wet. The sanitary condition of the city was extremely bad, and the pools formed by the copious rains were filled with filth, which soaked into the ground. The succeeding winter was unusually mild, hardly any ice was formed and the frost did not penetrate into the ground. The Summer of 1793 was hot and dry, and the burning sun drew up the miasmatic exhalations from the parched and polluted ground. About the middle of July an epidemic broke out in the quarter on the river front resorted to by seamen. Ships from Santo Domingo and other West India ports were lying at the wharves. For a time the disease, though extremely fatal, was confined to this section of the city and no general alarm was felt. But during August the disease spread from quarter to quarter, until the whole city was involved.

### WHERE GIRLS MAKE LOVE QUEER CUSTOMS IN SOME LANDS BY WHICH MARRIAGES ARE CONTRACTED

THE students of psychology and sociology know that women have cultivated an attitude of effeminate coyness along with the thousand and one conventionalities that have been thrust on them. In spite of these opinions, says the Chicago Tribune, in the days gone by it was almost as common for the woman as for the man to do the courting. Today there are parts of the world where young women feel they are doing nothing wrong by taking this pleasure and responsibility on themselves.  
In Polynesia there are no women's clubs and the doctrine of woman's rights has never been heard, and still these half emancipated young girls feel they have the right to extend an offer of marriage to an equal or to an inferior. These advances are sometimes accepted, again rejected. When their love is unrequited they do not commit suicide or take poison, as an American novelist might make us believe. They may grieve a little while, only to console themselves with the thought, "If at first you don't succeed, try, try again." These proposals are often spoken in most romantic words.  
A Fijian maiden desperately in love with a young man asked his father if she might love his son, and receiving no encouragement, she said:  
"Let me only live outside of his home. I will sleep upon the woodpile. If I may only light his cigarette for him I shall rejoice."  
"I may only hear his voice from a distance; it will suffice. Life will be pleasant to me."  
Between the northern and southern extremes of New Guinea lies Torres Strait. The largest island in the strait is inhabited by Melanesians, whose customs are singular and unique—they are of special interest to students occupied with the phenomena of love and marriage. They are, with one exception, of the Papuan type, frizzled-hair people, who cultivate the soil, use the bow and arrow, and, in Australia like, treat the women with consideration.  
Professor A. C. Haddon, the most eminent authority on these people, says that the women of the region are wonderfully independent. The most a man ever dares to suggest he is fond of a girl, but if he actually proposed, he would be the laughing stock of the whole district. On the island of Tule boys are taught:  
"You no like girls first; if you do girls laugh and call you woman." When a girl likes a man, she tells his sister and gives her a ring of string. She tells the brother she has some good news for him, and if he approves they select a rendezvous, where the conversation is carried on in this manner:  
"You like me proper?"  
"Yes," she declares. "I like you proper, with my heart inside. Eye along heart as you decide on my cousin."  
Half frightened, he continues: "How you like me?"  
"She usually answers: 'I like your leger skin good. You my man.'"  
In a neighboring island, courtship assumes a more practical form. The lovesick maiden sends her young man food, and plenty of it. He waits some time, and if he decides to approve of her he acknowledges her favor by eating all she has sent him. A good dancer is always admired in these islands. A man's being married does not prevent his being courted again. Girls have enough tact not to make this known to the wife. A sister is selected.  
Some of the girls are wonderfully persistent. Haddon tells of a girl who was in love with a cook. She made the advances, but he paid no heed, and so she accused him of trying to steal her. She carried on long lawsuit, though the

case was decided in the man's favor. In spite of these advances most of these women become the property of their husbands when married—sometimes to the extent if a man gets angry, he kills his wife, and his sister if she remonstrates.  
In New Zealand women do their courting in a most romantic fashion. The young girl visits the courting-house set apart for the purpose at an hour in the dark she says: "I love So and So and I want him for my husband," whereupon the chosen lover, if willing, says "Yes," or enough to signify assent.  
The Pueblo girl is even more independent; after many a delightful and sometimes romantic flirtation she comes to the conclusion she is fonder of one suitor than the others and she tells her father she is determined to have the young man. The father usually acquiesces the young man with the advances. If a woman happens that any objections are raised, but the father of the bridegroom must reimburse the parents of the maiden for the loss of their daughter. This is done by a portion of presents in keeping with their wealth and rank.  
The young people are thoroughly independent, and if they do not love each other as much as they imagined they separate and leave their children to be cared for by the grandparents. The Moqui girls are also strong in their love affairs; they are enticed with a verbal contract. Goods, personal effects and valuables of the woman still belong to them. If a man dies his widow takes all with her. The husband is often indebted to a wife for a loan, and this keeps them together where otherwise divorce would ensue. Among the Stockade Indians when the man falls in love he must consult the father of the girl, though it is more usual for the girl to make the advance. The usually marry from the same tribe, but if a man marries out of his tribe he must join his wife. It is thought she can work better in a country that is known to her.  
The Indian girls of the Hudson, according to several reliable authorities, signify openly their desire for matrimonial union. When one of them takes a notion to marry she covers her face with a veil and sits covered as an indication of her desire. If she attracts a suitor negotiations ensue, presents are given by relatives and friends and the bride taken.  
A pretty girl, Manjilukwis she was called, was fond of a self-contained, egotistical young man who had no special fondness for her beauty. She had a notion that her beauty as a housekeeper might win him through her beauty did not. She was sollicitous in attending his wants, mended his moccasins and prepared his food, but he was equally indifferent to these kindnesses. So she resolved to play a trick. She dug a hole in the spacious lodge and covered it carefully. When the young man returned from the chieftain's house down in the usual place and fell in.  
"Ha, ha," said the girl, as she helped him out. "You are my prisoner at last. I did it on purpose. The size of an ordinary dry goods box is not the life that the everyday American citizen cares to essay. To endure such life for hours at a stretch, without sleep, and to stand exposed in all climates—such is life aboard a torpedo craft for officers and men alike.

There is no discrimination; that is why one sees beardless faces and slender figures behind the conning-towers when these long, three and four-stacked tiers run into port for coal, and water at frequent intervals, which is necessary on account of their limited space for carrying these necessities. In the comparatively smooth waters of this harbor the torpedo-boats look very much like the motor racers in disguise, but they are far from being the pleasure craft that the auto-boats are, and they go where the helmsman of a motor-boat would not dare to venture.  
The ocean is the place to see the tor-

# "Somewhat Different" Sale

There are great things doing down at our store! Just step down and take a peep at our windows! Cast your eyes upon those red tags! You'll read "\$18, \$16, \$15" everywhere. Then you'll see the big, black sign reading: "Any article in these windows, \$10!" You are invited to walk in and examine the values at close range, and then we know you'll do business with the cashier. There are over 50 articles in the windows, and there's sure to be something you need. Every one will go for \$10—cash or credit.

Why all this? The reason is simple: Our buyer, Mr. Phil Gevurtz, returned Monday from the Eastern manufacturing centers where he purchased a trainload of brand-new goods for the Fall trade, and we are going to make room for it by sacrificing the odd pieces from all over the house. To give zest and sparkle to this sale we have added many everyday staples. Only the goods on exhibition are sold at these prices. Now, this is not all for

## This Sale Changes Every Day

Now goods will be placed in the windows for TUESDAY'S sale at \$8.00. You will find many \$12 and \$13 values priced at \$8.00 on Tuesday morning. We are able to mention but a few of the many different items for the coming week. There will be hundreds.

### KEEP YOUR EYE ON OUR WINDOWS

<p><b>A \$15 Bed FOR \$10</b></p>  <p>\$15.00 Brass and Iron Bed, white and green enamel, gilded. Monday ..... \$10</p> <p>\$13.50 Brass and Iron Bed, green and blue enamel, Monday \$10</p> <p>See First and Yamhill-Street Windows.</p>	<p><b>\$15.00 Verni Martin Chairs</b>, beautifully hand painted and gilded. Monday only ..... \$10</p> <p><b>\$15.00</b> beautifully gilded parlor chairs, upholstered in silk damask. Monday ..... \$10</p> <p>See Our Windows.</p>	<p><b>\$16.00 Ladies' Writing Desk</b>, in golden oak, wax filled and hand polished. Monday ..... \$10</p> <p>The same in birdseye maple, same cost, but goes Monday for \$10</p> <p>See Our First-Street Windows.</p>	
<p><b>\$6.00 Toilet Sets</b>, beautifully gilded, 10 pieces. Friday... \$4.00</p> <p><b>\$3.50 Toilet Sets</b>, 6 pieces. Saturday for ..... \$2.00</p> <p>Watch Our Windows.</p>		<p><b>\$16.00 Roman Parlor Chairs</b>, mahogany frames, beautifully upholstered. Monday only ..... \$10</p> <p><b>\$12.00 Gentleman's Shaving Cabinet</b>, large bevel plate mirror, mahogany frame, Monday only \$10</p> <p><b>\$14.00 Bookcases</b>, white maple, golden oak and weathered oak. Monday only ..... \$10</p> <p><b>\$14.00 Divans</b>, upholstered in crush velour, mahogany frames. Monday only ..... \$10</p> <p>See Them in Realize the Bargains in Our Windows.</p>	<p><b>\$14.50 Parlor lamp</b>, beautiful hand-painted globes. Monday only ..... \$10</p> <p><b>\$14.50 Corner Chairs</b>, upholstered in high-grade velour. Monday only ..... \$10</p> <p>See Our Windows.</p>
<p><b>Tuesday, Eight-Dollar Day</b> Tuesday will be EIGHT-DOLLAR Day. Come down Tuesday morning and inspect the bargains we offer for \$8.00.</p>			

<p><b>\$14.00 Music Cabinet</b>, in mahogany, beautifully hand polished. Monday for ..... \$10</p> <p>See First-Street Windows.</p>	 <p><b>\$15.00 Parlor Center Tables</b>, in mahogany, beautifully hand polished. Monday they go for \$10</p> <p>See Our First-Street and Yamhill Windows.</p>	 <p><b>\$15.00 Parlor Rockers</b> in highly polished mahogany, saddle seats, very graceful and comfortable. Monday ..... \$10</p> <p>Same upholstered in high-grade velour; regular \$16.00 rockers, sold Monday at ..... \$10</p>	 <p><b>\$12.00 Center Tables</b>, in golden oak and mahogany, round tops, square tops, fancy legs, plain legs; all sizes and designs. On TUESDAY they will be shown in our windows and sold on that day only at ..... \$8.00</p>
<p><b>Wednesday</b> Wednesday will be SIX-DOLLAR Day. By that time you will know what this "Somewhat Different Sale" means, and there will be no need to urge you to be here early for bargains.</p>	<p><b>Thursday</b> Thursday will be FIVE-DOLLAR Day, and there will be a greater variety to choose from and the cut-prices will prevail just as strenuously as on previous days. This will be one of our great days for value giving.</p>	<p><b>Friday</b> Friday is reserved for FOUR-DOLLAR Day. You will be surprised at the variety of "things" we'll give away that day. Well, we'll not exactly give 'em away, but it will be next door to it. Come down Friday morning and see what \$4.00 will buy.</p>	<p><b>Saturday</b> Saturday will be the climax of the week's selling from the windows. There's no use in attempting to enumerate the money-saving bargains we have up our sleeves for that LAST DAY. It is good sometimes to anticipate. We'll allow you to anticipate for a few days.</p>

## "Portland Day" Yell

(Suggested.)  
"Bah! Bah! Bah!"  
"Zip! Ah! Boom!"  
Who are who are—what are we?  
He! he! he! Don't you see?  
We are—we are—we are they!  
Bang! Bang! Bang! Then get your furniture from Gevurtz.

## I. Gevurtz & Sons

"Gevurtz Sells It for Less"

173-175 First Street 219-227 Yamhill Street Eleventh Annual Meet

## The Singer Sewing Machine Company

Extends to you a cordial invitation to visit its Pavilion

IN THE MANUFACTURES BUILDING at the Lewis and Clark Exposition PORTLAND, OREGON

This Pavilion will contain machines for every stitching process used in the family and in manufactures, some of which must be of interest to you. Many of these machines will be running and all will be capable of operation

Samples of their work will be given to those interested

### Free Souvenir Views of Pacific Coast Scenery

There are Five Sets, each comprising Ten Views

### IN AN ENVELOPE READY FOR MAILING

Why He Decided to Sit.  
Detroit Tribune.  
"I was never so ashamed in my life," said Mrs. Boggisley, "as when you refused