

**DEEPEST OF MINES**

**Morro Velho, Located in the Gold Belt of Brazil.**

Was First Worked by Portuguese Discoverers in 1693—Combined Depths of Connected Shafts Have Reached 5,824 Feet.

In a recent bulletin of the Pan-American Union there is an account of the world's deepest mine, written by Benjamin Le Roy Miller of Lehigh University and Joseph T. Singewald, Jr., of Johns Hopkins. The mine is the Morro Velho, in the gold belt of Brazil, where the Portuguese were first induced to settle by the discovery of the yellow metal. The first gold was discovered in 1693, near the present city of Ouro Preto. The gold was coated with a black substance and hence was called "ouro preto"—black gold. The city which they founded was called Villa Rica de Ouro Preto—the Rich City of Black Gold—a name which was somewhat cumbersome even for the Portuguese, so they finally shortened it to just Ouro Preto, the name by which it is known today. Once it was the most important city in Brazil, the valuable metal being obtained from the gravel of almost every stream in the region. Not only the stream gravels yielded gold, but many gold-bearing quartz veins were worked. Just when the Morro Velho mine was first opened is not known, but it was being operated toward the close of the eighteenth century, and considerable work had been done when the present company obtained control of it in 1834. The ore body consists of a great vein of unusual persistence and regularity that dips into the earth at an angle of about 45 degrees. It may be likened to a gigantic knife blade, held vertically and thrust into the earth at this angle, with the point still lower than the present deepest workings. And it is these workings that make the mine remarkable. The combined depths of the connected shafts give a total of 5,824 feet. In other words, here is a gold mine that is being worked at a depth of more than a mile below the surface of the earth.

The rock temperatures increase as the earth's crust is penetrated, in some regions the increase being as much as one degree Fahrenheit for each fifty to sixty feet increase in depth. At this rate the temperature at the bottom of this mine would be over 100 degrees higher than at the surface, and fried ham and eggs might be prepared for the miners without any other heating apparatus than the

loose rocks lying about. Incidentally miners would be going through the frying process, too. Fortunately, however, in this mine the rate of increase of temperature is only one degree for every 100 to 120 feet, giving the rocks a temperature of only 112 degrees. By forcing cooled air down into the mine by means of fans the temperature is lowered to a little less than 100 degrees. Even at that it is rather smug and the miners usually wear only shoes, donning trousers when company is expected. The mine has produced a total of about \$55,000,000 worth of gold, and is being worked now at a profit of something more than \$700,000 annually.

**Headed the Sign.**  
Near Springfield, Mass., there is a big parklike estate owned by a man who has a strong detestation of trespassers. To prevent the violation of his privacy, he posted all manner of warning signs on his place.

One evening he encountered a strange couple taking a "lovers' walk" on his property.

"Can't you read?" growled the owner, as he pointed to a sign.

"We can read, all right," said the swain.

"That sign there?" demanded the man, with another growl.

"We have read it," returned the other. "It says 'Private,' and that's just why we came down here."—Everybody's Magazine.

**His Liberality.**  
"H'm! This is the tenth time you have been before me," sternly said Squire Peavy.

"Yassah!" replied Brother Ramdiddy. "'Tis if yo' says so, sah, but I was under de 'pression 'twuz de 'leventh. I don't p'ussom to say one thing when a smart white man tells me diffunt. But let it go, anyhow, sah; I means to give good measure. Al'lus was plumb lib'ral dat-uh-way.'"—Judge.

**Scheme Never Works.**  
At one of those large affairs in a studio a guest went up to his host and asked for an introduction to the woman in pink.

"Why, certainly, I'd introduce you to her in a moment, but I can't remember her name."

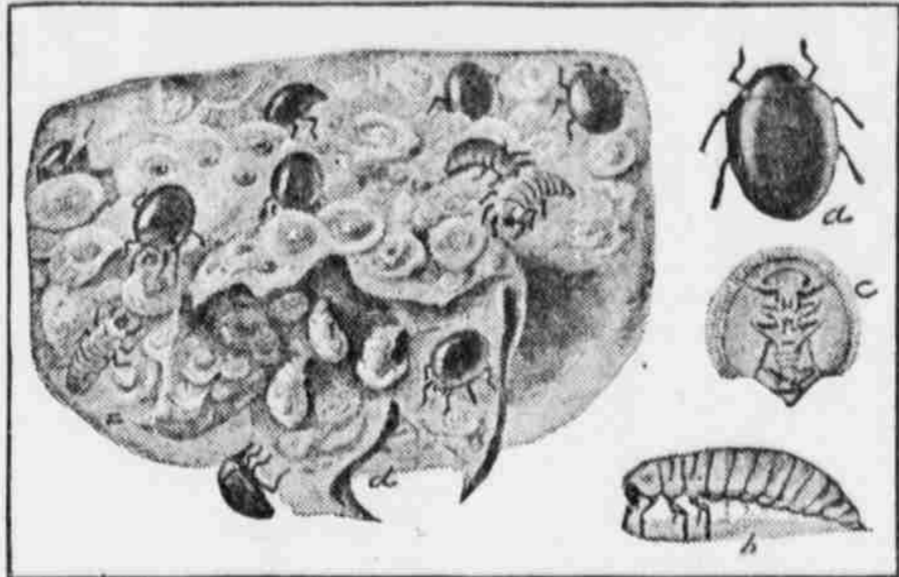
"Her name is Miss Smythe."  
"Come along then. Er—by the way, what's your name?"

**Accounted For.**  
"Do you enjoy entertaining social-ly?"

"In a way," replied Mr. Cumrox. "When we have a party at my own house so many people don't look me over and wonder how I happened to get invited."

Whisky straight is the cause—a crooked walk the effect.

**EFFECTIVE CONTROL OF SAN JOSE SCALE**



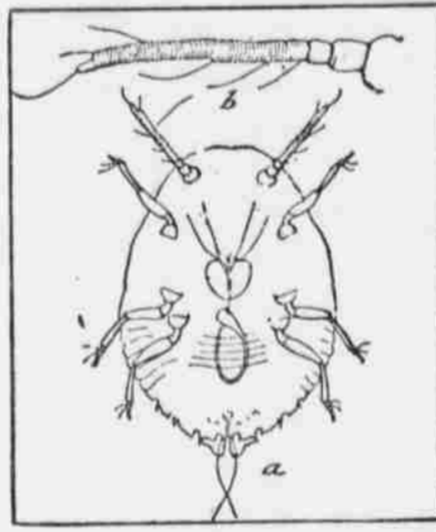
San Jose Scale—Blossom End of Pear Showing Scale, with Larvae and Adult Lady Beetles Feeding on Them—A, Adult Beetle; B, Larva; C, Pupa. (All Enlarged.)

(By LEONARD HASEMAN, University of Missouri, College of Agriculture.)  
The most effective and economical method we have at present for the control of the San Jose scale in the orchard is to spray with one of the best scale-destroying washes in the fall or early spring. There are a number of washes which are entirely effective when properly applied. These may be grouped in two main divisions—oil and lime-sulphur washes.

In some respects the oil washes have advantages over the lime-sulphur, while in other respects the latter has marked advantages. The oil washes are applied more easily, spread more evenly and creep down into cracks and crevices, where it is difficult to force the lime-sulphur wash. It takes less of an oil wash to cover the same surface and the average fruit grower is likely to spray more thoroughly with the oil washes, especially if he does not "retouch" trees sprayed with lime-sulphur. An oil wash, if used at proper strength, is more quickly fatal, which often enables it to destroy the scale before dashing rains come and wash it off. Among the disadvantages attending the use of oil washes may be mentioned the price of material, in case prepared commercial brands are used, and the greater danger of injuring the trees by successive applications.

The lime-sulphur wash is the old standard scale wash. It has been in use since the early introduction of the

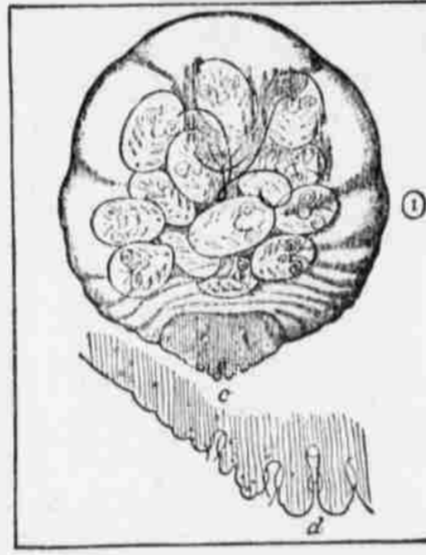
dary value as a fungicide, its injurious effects upon trees, and the thoroughness with which it can be applied if one goes to the trouble of "touching up" patches that are missed by the first application. The principal factors which make this wash out of favor with many fruit growers are the trouble accompanying its preparation by external heat and its caustic properties, which make it disagreeable to use. But with a little experience and



San Jose Scale—Young Active Larvae Before Settling Down—A, Central View of Larva, Showing Long Needle-like Setae, Greatly Enlarged; B, Antenna, Still More Enlarged.

care, one can prepare and apply it without suffering the least inconvenience.

The destruction of the scale by thorough fumigation is more certain than either dipping or spraying, since a gas is more penetrating than a liquid, but unfortunately the scope of its applicability is much limited. Where infested stock can be enclosed in a tight box, or rooms in which the deadly gas is generated, it can be completely freed of the scale. The practice of fumigating finds its greatest usefulness in the nursery, where infested stock can, with little extra labor and a slight expense, be carefully fumigated, which, if properly done, will not injure the stock and yet destroys every scale present. Fumigation is also used with success in young orchards where the trees can be covered with a tent or box made of heavy cloth, well saturated with oil, which makes it practically airtight. Orchards of large bearing trees have been successfully fumigated, but the expense of treating rapidly increases with the size of the trees, and it should not be undertaken by the average fruit grower in the orchard. He will get better results from fall or spring spraying and run less risk of injuring his trees.



San Jose Scale—C, Mature Female Removed from Scale, with Young Insects Showing Through Body Wall of the Parent; Greatly Enlarged; D, Anal Plate, Still More Enlarged.

scale into California and when properly prepared and carefully applied is extremely effective in controlling the scale. Points in favor of the lime-sulphur wash are the cheapness with which it can be prepared, its second-

**WATCH FOR BORERS IN APPLE ORCHARD**

Examination of Trees Should Be Made Twice Each Year—Use a Sharp Pointed Wire.

Apple trees should be examined for borers at least once or twice each year. In the spring and early fall are the times to look for borers. Probably in the early fall is the better time if just one search a year is to be made. The presence of the borer is discovered by the brown castings they make. These are found at the base of the tree. An incision is made with the knife and a sharp pointed wire with a slight hook is inserted and the borer is drawn out. If the hole does not run straight it may be necessary to soak a wad of cotton in carbon bisulphid and insert this in the hole and then seal the opening with moist dirt. The fumes of the carbon bisulphid will kill the insect.

The beetles can be prevented from laying their eggs in the trees by painting with pure white lead and lino seed oil paint made pretty thick. The dirt should be cleaned away to a depth of about three inches so that the trunk can be painted below the surface to a height of more than a foot above ground. After painting the dirt should be replaced.

**Best for Sweet Pickles.**  
Sweet Russet is one of the best crop apples for sweet pickles. Many like it to eat out of hand. It is not a good keeper, however, and should be planted only for home use.

**WINTER HARBORS OF THE CODLING MOTH**

Much Good Can Be Accomplished by Destroying Larvae in Packing Sheds and Cellars.

Not only are the hibernating larvae of the codling moth to be found in the orchards right now, but there are also other places where they occur plentifully. One of the most common winter harbors is the packing shed or cellar where apples were boxed throughout the season. Wormy apples are, of course, taken into the packing sheds along with the good fruit and multitudes of the worms leave the apples and hide wherever a suitable place may be found. Cracks between boards, nail holes, knot holes, boxes and rubbish of all kinds in the shed are favorable places for hibernation.

In one packing shed examined a while ago there were a number of boards with old nail holes in them and nearly every one of them contained one or more larvae which had made their cocoons within and were comfortably located for the winter.

Much good can be accomplished by destroying the larvae in the packing sheds and cellars. In some cases it might be possible to screen sheds or caves so that the moths could not get out to lay their eggs upon trees in the spring.

**Health for Sick Women**

**For Forty Years Lydia E. Pinkham's Vegetable Compound Has Been Woman's Most Reliable Medicine—Here is More Proof.**

To women who are suffering from some form of woman's special ills, and have a constant fear of breaking down, the three following letters ought to bring hope:—



North Crandon, Wis.—"When I was 16 years old I got married and at 18 years I gave birth to twins and it left me with very poor health. I could not walk across the floor without having to sit down to rest and it was hard for me to keep about and do my work. I went to a doctor and he told me I had a displacement and ulcers, and would have to have an operation. This frightened me so much that I did not know what to do. Having heard of Lydia E. Pinkham's Vegetable Compound I thought I would give it a trial and it made me as well as ever. I cannot say enough in favor of the Pinkham remedies."—Mrs. MAYME ASBACH, North Crandon, Wis.

**Testimony from Oklahoma.**

Lawton, Okla.—"When I began to take Lydia E. Pinkham's Vegetable Compound I seemed to be good for nothing. I tired easily and had headaches much of the time and was irregular. I took it again before my little child was born and it did me a wonderful amount of good at that time. I never fail to recommend Lydia E. Pinkham's Vegetable Compound to ailing women because it has done so much for me."—Mrs. A. L. McCASLAND, 509 Have St., Lawton, Okla.

**From a Grateful Massachusetts Woman.**

Roxbury, Mass.—"I was suffering from inflammation and was examined by a physician who found that my trouble was caused by a displacement. My symptoms were bearing down pains, backache, and sluggish liver. I tried several kinds of medicine; then I was asked to try Lydia E. Pinkham's Vegetable Compound. It has cured me and I am pleased to be in my usual good health by using it and highly recommend it."—Mrs. B. M. Osgood, 1 Haynes Park, Roxbury, Mass.

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.



**160 ACRE FARMS IN WESTERN CANADA FREE**

**Three Hundred Million Bushel Crop in 1915**

Farmers pay for their land with one year's crop and prosperity was never so great.

Regarding Western Canada as a grain producer, a prominent business man says: "Canada's position today is sounder than ever. There is more wheat, more oats, more grain for feed, 20% more cattle than last year and more hogs. The war market in Europe needs our surplus. As for the wheat crop, it is marvelous and a monument of strength for business confidence to build upon, exceeding the most optimistic predictions."

**Wheat averaged in 1915 over 25 bushels per acre**  
**Oats averaged in 1915 over 45 bushels per acre**  
**Barley averaged in 1915 over 40 bushels per acre**

Prices are high, markets convenient, excellent land, low in price either improved or otherwise, ranging from \$12 to \$30 per acre. Free homestead lands are plentiful and not far from railway lines and convenient to good schools and churches. The climate is healthful.

There is no war tax on land, nor is there any conscription. For complete information as to best locations for settlement, reduced railroad rates and descriptive illustrated pamphlet, address Superintendent Immigration, Ottawa, or

**W. V. BENNETT, Room 4, Bee Bldg., Omaha, Nebr.**  
Canadian Government Agent



**Efficiency In Childhood**

comes with proper training—a most vital factor in which is right food.

If a child is to gain physically and expand mentally certain vital mineral elements—grown in the field grains—are imperative.

These elements, such as phosphate of potash, etc., are lacking in many foods, but abundantly supplied in the famous pure food—

**Grape-Nuts**

Made of whole wheat and malted barley, Grape-Nuts with cream or good milk supplies well-balanced nourishment—not only builds up the growing child, but repairs daily the wear and tear of body and brain.

Grape-Nuts has a delicious nut-like flavour—is specially processed for easy digestion—and is always ready to eat direct from the package. Economical—convenient—and makes for efficiency.

**"There's a Reason" for Grape-Nuts**  
Sold by Grocers everywhere.

**That's the Way, Girls.**  
The Chicago Post reports that the first Chicago girl to take advantage of her leap-year privileges landed her man and married him within an hour. That's the stuff. Look him over, girls, and be sure he is worth the powder and shot it would take to kill him, and then use the hooks. He can't get away.—Houston Post.

**Junk.**  
"Smithers bought eight million shares of mining stock yesterday."  
"Great Scott! Where did he get the money?"  
"He didn't need much. He got the stocks for a cent a pound as waste paper."

**The Case Stated.**  
"There isn't a scrap of evidence about this fight."  
"Why, man, it was all scrap!"

Many an outwardly handsome woman is inwardly homely.

**Peace at Any Price.**  
"Do you let your wife have her own way?"  
"Certainly; and most of mine."—Boston Transcript.

**ITCHING, BURNING SCALPS**  
Crusted With Dandruff Yield Readily to Cuticura. Trial Free.

Cuticura Soap to cleanse the scalp of dandruff crustings and scalings, and Cuticura Ointment to soothe and heal itchy and irritating. Nothing better, surer or more economical than these super-creamy emollients for hair and scalp troubles of young or old.

Free sample each by mail with Book. Address postcard, Cuticura, Dept. L, Boston. Sold everywhere.—Adv.

**All Off.**  
"How did the bowling contest come out last night?"  
"Nobody had any spare change for the pinboys, so they went on a strike."

**SUDDEN DEATH**

**Caused by Disease of the Kidneys**

The close connection which exists between the heart and the kidneys is well known nowadays. As soon as kidneys are diseased, arterial tension is increased and the heart functions are attacked. When the kidneys no longer pour forth waste, uræmic poisoning occurs, and the person dies and the cause is often given as heart disease, or disease of brain or lungs.

It is a good insurance against such a risk to send 10 cents for a large trial package of "Anuric"—the latest discovery of Dr. Pierce. Also send a sample of your water. This will be examined without charge by expert chemists at Dr. Pierce's Invalids' Hotel, Buffalo, N. Y. When you suffer from backache, frequent or scanty urine, rheumatic pains here or there, or that constant tired, worn-out feeling, it's time to write Dr. Pierce, describe your symptoms and get his

medical opinion, without charge—absolutely free. This "Anuric" of Dr. Pierce is 37 times more active than lithia, for it dissolves uric acid in the system, as hot water does sugar.

Simply ask for Dr. Pierce's Anuric Tablets. There can be no imitation. Every package of "Anuric" is sure to be Dr. Pierce's. You will find the signature on the package just as you do on Dr. Pierce's Favorite Prescription, the ever-famous friend to ailing women.

Worry is a frequent cause and sometimes a symptom of kidney disease. Thousands have testified to immediate relief from these symptoms after using Dr. Pierce's Anuric Tablets for the kidneys and backache.

Dr. Pierce's Favorite Prescription makes weak women strong, sick women well. No alcohol. Sold in tablets or liquid.