

HEALTH SCHOOL

Pennsylvania State Department of Health.

Questions.

- (1) What variety of mosquito is responsible for the spread of malarial fever? (2) Where do mosquitoes deposit their eggs? (3) How may mosquitoes be eliminated?

MOSQUITOES

Madame Anopheles, pronounced (an awful case), yawned and stretched, then with characteristic abandon proceeded to stand on her head—rather unladylike, but Madame Anopheles was a mosquito and after all that position was natural to her special family, thus differing from her cousins, the Culex's, who always stand with their slim bodies parallel to the object upon which they are resting.

Madame Anopheles had subsisted for the first two days of her life upon vegetable diet; when her instinct warned her that the eggs which were already forming in her body, would not develop unless she had a meal of blood, she sallied forth to find a victim. She floated through an open window and softly settled on the cheek of a man wrapt in the profound sleep of exhaustion following a paroxysm of the chill, fever and sweating of malarial fever.

Only a few drops of blood served to fill her stomach to distention, yet those few drops, drawn at the favorable time, contained numbers of the two elements which, only in the stomach of the Anopheles Mosquito (according to present knowledge) can combine to reproduce the Amebulae which are the active causes of malarial fever.

Soon in her body thousands of new born Amebulae were ready to be carried into the blood of the next person whose skin she punctured.

In a week Madame Anopheles, before, simply an annoyance, had become a carrier of malarial fever and a grave menace to public health.

All mosquitoes deposit their eggs in either stagnant or very slow moving water. A rain barrel—an overturned tin can—a water bucket—pitcher, anything which will hold water. A few days later the eggs split and wrigglers emerge, fuzzy, squirming, thread-like they dart about erratically, now and again coming to the surface for air. The Anopheles are equipped with short breathing tubes along the rear portion of the back. As they thrust their air tubes through the surface they are forced to assume a position almost parallel with the top of the water.

Other varieties of Mosquitoes have much longer breathing tubes situated at the extremity of the back, which cause them to hang with the head downward when taking air—in this way the Anopheles may be distinguished even in the larvae or (wriggler) state.

Next comes the pupal stage when the larvae changes its form somewhat and floats at the surface looking something like a curled up cutfish. After a few days of this life, the skin splits and the full grown mosquito emerges.

Male mosquitoes do not bite, it is not at all a matter of preference, but because they are not so constructed that they can.

Anopheles Mosquitoes are found in all hot countries, they abound in our own southern states.

They are also found in Pennsylvania.

There is no malaria where there are no Anopheles Mosquitoes. The Anopheles can not give malaria unless it suck blood from a malarial patient. The Anopheles may be distinguished from other varieties of mosquito by their characteristic posture, standing almost on their heads and by the black specks on their wings.

Patients with malaria must be screened against mosquitoes.

Mosquitoes can be exterminated in any locality by destroying their breeding places.

Marshes should be drained, pools of standing water which cannot be drained should be covered with a thin layer of oil—kerosene or a crude oil dilution.

A small quantity of oil soaks distributes itself evenly over a large body of water. When mosquito larvae come to the surface to breathe, the oil fills the breathing tube and they die from suffocation. Small receptacles about the house containing water may prove excellent breeding places for mosquitoes. The drip from the back yards hydrant, the clogged rain spout, the horse trough are all favorable to mosquito breeding.

In long continued dry seasons the water traps between surface drains and sewers in towns and cities afford excellent breeding places for mosquitoes. Such traps should either be oiled after each rain or routinely flushed once a week to wash out the larvae before they have time to develop into mosquitoes.

With Anopheles Mosquitoes there can be no malaria—with no standing water there can be no mosquitoes.

Sorely pressed as average human nature is by life's limitations it is possible that constant prosperity would prove a dangerous thing.

FARM NOTES.

Heavy clay soil produces slowly until the vegetable matter increases. Sandy soils, unless well supplied with vegetable matter, permit the fertilizer to filter away beyond reach of plant roots before the plants get all out of it.

There is no reason for broadcasting manures in the vegetable garden. It is wasted energy. Apply manure to each hill or row, with dirt between it and the seed. This gives the greatest results for the least expenditure of time and money. No need to feed weeds.

Loamy, or so-called rich, soils hold their nutrient part in readiness because there is sufficient vegetable matter to make it light. This gives a chance for the air to aid the germs of fertilization to increase and multiply, to prepare the substances to be taken up by the plants.

Michigan is the first State to offer a reward for planting nut trees beside highways. In Europe the profit from roadside nut trees assists in maintaining roads. Roadside nut trees abroad are protected from vandalism by public sentiment, and this is true of the nut orchards in the principal centers of production in this country.

Recoveries by the government, during the first fiscal year, for trespasses on the national forests amounted to \$87,082 in damages and \$3,225 in fines. These included grazing, timber, fire, game, and occupancy.

Do not follow the idea that when planting trees you should put fertilizer at the bottom of the hole. Plant your tree, and when within about two inches of the top place your fertilizer and cover over with soil. The rain will wash the essence down to the roots. The same practice can be followed with established trees. Care should be taken that the fertilizer does not touch the bark or roots. Remember, trees take up food with their fibrous roots, and fibrous roots usually are near the ends of big supporting roots, and tree roots usually go as far outward as the branches extend.

Fifteen years ago an Illinois farmer selected a piece of steep hillside land, unsuitable for regular cultivation, and set out a grove of young chestnut trees. The trees are now giving him as good an income as some farming land, and practically without attention. Chestnut blight, which has destroyed most of the chestnut trees in the east, has not yet done material damage to chestnut land plantings west of the natural distribution of the American chestnut. Blight resistant varieties are now being developed by the United States Department of Agriculture and by associations of nut growers.

Milk is at the best temperature for a complete separation just as soon as it comes from the cow. At that time it is also at the best possible temperature for bacterial growth. Since fermentation always occurs in milk that is kept any length of time and since milk is apt to gather in large numbers of diseased germs or bacteria of all forms and furnishing for them the most suitable conditions for rapid growth, it is of great importance that some precautions be taken to prevent this bacterial growth that we may secure a good product and in cleanliness rests the entire secret—first, prevention of infection; second, prevention of the growth of germs already present, and third, the destruction of those already present.

Tests made by the United States Department of Agriculture (in cooperation with the Pennsylvania State Department of Agriculture and the Pennsylvania State Experiment Station) in 1919 and 1920 to determine the behavior of American varieties of potatoes in the presence of the wart disease, a serious European trouble recently found in this country, have shown that 26 named varieties of American origin are immune to the disease. These are: Irish Cobbler, Flowerball, First Early, Early Eureka, Early Petoskey, and New Early Standard, of the Cobbler group; Etnola, Extra Early Sunlight, White Albino, and Early Harvest, of the Early Michigan group; Spaulding Rose, Northern King and White Rose, of the Rose group; Burbank of the Burbank group; Green Mountain, Green Mountain Junior, McKinley, New Oregon, McGregor, Norcross, and Gold Coin, of the Green Mountain group; Round Pink Eye and McCormick, of the Peachblow group; and Keeper, Success, and Ursus, which are unclassified.

In addition, 12 new, unnamed seedling varieties developed by the department were also found to be immune, as well as 24 English and 5 Scotch varieties. Seven of the English varieties, namely, Edzell Blue, St. Malo Kidney, Majestic, Arran Rose, Great Scot, and Irish Queen, gave good yields, but only one, Edzell Blue, gave a yield that compares favorably with that of the best American commercial sorts.

Potato wart has been a serious disease in northern Europe for many years, and in 1912 the United States placed an embargo on potatoes coming from countries where it was known to exist. Shipments received prior to that date are considered responsible for its introduction into this country. It was discovered in 1918 in gardens at Highland, Pa., in the heart of the anthracite mining district, and subsequent surveys have shown that its occurrence is restricted to a limited number of mining villages in Pennsylvania, West Virginia, and Maryland, inhabited largely by foreigners, from which its spread has been restricted by prompt and rigid State quarantines.

Wart is looked upon as one of the most serious potato diseases. In badly infected gardens in Pennsylvania practically the entire crop was found to be destroyed by the disease. However, the discovery that a number of the best commercial American varieties of both early and late potatoes are immune to wart offers an important means of control. These varieties are so generally grown that it will not be easy for the disease to gain a foothold in our important potato-growing districts even if it should escape from the areas to which it is now confined.

A VISIT TO A GLASS FACTORY.

One of the most interesting of all factories to visit is a glass factory. About the first thing that catches the stranger's eye on such a visit is the mixing room, where may be seen large boxes or troughs on rollers, each containing a large quantity of white sand, or silica, lime, soda, and potash, with the various metallic substances, such as lead, iron, copper or gold, required to produce the different colors—amber, blue, green, or ruby—that glass is to have.

In this manufacture great quantities of red lead are used, and the preparation of this metallic oxide, which is brought to this country in its crude state, is an important department of the manufactory. The cars containing the materials of which glass is to be made are rolled out at intervals to the hungry mouths of the great furnaces, which contain the fiery molten mass, and with great shovelfuls the furnaces are fed.

Before the mouths, or openings, stand the glass-blowers, with their long hollow tubes, or pipes, to the end of which, as they plunge them into the fiery liquid, adheres a quantity of the viscous mass.

No more interesting sight can be witnessed in an industrial establishment than that of the glassblower, as he stands with inflated cheeks blowing into the end of his tube, and causing the mass of rapidly cooling glass to grow larger every second, or else as he plunges it into the cast-iron mold in his feet to take out presently a well shaped bottle or drinking glass.

These molds are of every conceivable shape and size, and one great room is generally utilized to store them, as well as to contain the ingenious little presses that are used to tighten them about the glass.

Close together stand the makers of small and large bottles, cruet, lamp chimneys, vases, ornaments, and the like, and the thousand and one other glass objects that are to be seen in the household.

The best work is molded with the simple glass-maker tools, and is not run into the iron molds. A pair of shears, or nippers, a pair of tongs, and a few other small instruments are all the tools used to fashion our most beautiful glass vessels or ornaments.

A water carafe is formed by the skilled glass-maker from the little mass of molten glass in an incredibly short time, and the addition of a handle to a pitcher is one of the simplest things in the world.

The visitor will, perhaps, see an amber handle on a rich ruby pitcher, and be surprised to learn that the difference in color is produced simply by the reheating of the part now a ruby color. There are, however, few colors that will change in the furnace.

From the blowing and molding room one passes to the cutting room, where the difference between pressed and cut glass is quickly learned. The common pressed glass, which beside cut glass, looks so cheap, is wholly fashioned in the mold; but glass that is to be cut is taken to the cutting room perfectly smooth and plain and there marked with a red lead, according to the artist's design.

Then a cutter, who sits before a little rapidly revolving iron wheel, presses the article gently against the wheel and soon the symmetrical lines and cross lines appear in the glass, as engraved with a diamond.

For the finer parts of glass engraving a stone wheel is used, and for still more delicate work a copper wheel is employed.

For "ground glass" the principle tools are a wire brush and fine sand, which soon produce the desired effect. When the cutting is all done the glass is polished carefully and is ready for sale. It should be added that glass is sometimes etched with acids.

In one part of the furnace rooms there will be seen men drawing out glass and laying it down on the floor in long, round, black or dark-brown bars, or in rods. This is to be utilized

in the manufacture of glass buttons and glass jewelry. For the imitation rubies, amethysts, emeralds, and diamonds a very fine quality of glass is needed, and this must be colored with great care. In one of the store-rooms thick pieces of glass are to be seen. These are used in the making of railway signal lights.

The annealing, or tempering of glass is accomplished by placing it in ovens, where it is slowly heated and then slowly cooled. Small articles, such as lamp chimneys, are sometimes annealed by being placed in water, which is gradually allowed to become very hot, and then permitted slowly to cool.

The peculiar ribbed or corded appearance that some kinds of glass present is obtained by winding the half-completed vessel rapidly with a thread of molten glass and then reheating it. The cord or thread melts partly into the surface of the glass.

A Watch and its Idiosyncrasies.

An old jeweler, who has handled thousands of watches during his lifetime, and has observed a few of their numerous peculiarities, was talking one day on this subject. In the course of his conversation he said:

"Watches, all joking aside, are really almost human, sometimes. They take cold readily. Never lay a watch on a cold marble table or near an open window all night, after you have worn it next to your warm body all day; it will contract a sort of pneumonia and ten to one it will stop before long if the practice is kept up. The cold contracts the metal pivots, which, small as they are, must not be smaller, and they shrink. Thus the wheels cannot move.

"Watches are magnetized, too, by the persons who wear them. I have seen the statement that watches vary in time-keeping with the health of the wearer, and that, if changed from one person to another, they will also show slight variations. All of that is true. The static electricity of a person may effect the watch. All of us throw this off, some more than others. Dark persons give off more than light ones do, and a dark woman more than any one else. Dark women should have rubber cases for their watches, if they wish to have them keep perfect time.

"Never lay a watch flat at night, after it has been worn in a vertical position all day. It throws it off its base, so to speak. If the pivots be worn, it will not run level.

"A watch should be fed or oiled every eighteen months, even if running in the best of time. The oil dries in that time, and the wheels are likely to wear one another. Wind your watch in the morning. No, not at bed-time, but when you get up. That gives it the full spring to work on during the day, when the jars and jolts are more numerous. And hold your watch still when you wind it, and wind the key."—Lookout.

Gen. Pershing to Succeed March as Chief of Staff.

General John J. Pershing is to be the next chief-of-staff of the United States army, according to information in high army circles at Washington. The present chief-of-staff, Major General Peyton C. March, will cease automatically to be entitled to that rank or position, and will send his resignation to President Harding probably on March the fourth.

For Sale.—Sixty houses and lots.—J. M. Keichline. 65-40-3m

Natural Question.

Jimmie—"Mother, who is that man with long hair who is waving a stick in front of all those fiddlers?"

Mother—"He is the conductor, Jimmie."

Jimmie—"Oh, is he? Well, where do they keep the motorman?"—London Answers.

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