

ready infected with the disease.

Whenever the community becomes intelligent enough to vote the money for taking every case of known tuberculosis out into the country, and keeping it there until cured—and at the same time preventing the infection of others—then the days of consumption will be numbered, and its years may be counted upon the fingers of the two hands.

The great discovery of the decade has been the skin tests of Calmette and von Pirquet; by simply scratching or rubbing a little tuberculin into the skin, a reddening or reaction is produced which enables us to discover the disease at the very earliest stages, when it is as curable as measles, and long before it has become infectious to others. With the aid of this test we can now break up each nest of the disease, every focus of infection, as fast as we discover it. We can stop our present practice (as illustrated in New York City) of burying 10,000 cases of the disease every year, but breeding 20,000 new ones to take their place—which means that each case before it died infected at least two others.

Our best new weapon against the next deadliest captain of the men of death, typhoid fever, has been the discovery of the powerful aid and comfort in his murderous attacks given by that advance agent of pestilence, the house fly, which should be known as the "typhoid fly" or "filth fly." This pestilent insect breeds and revels in dirt and feeds on the same food that we do; indeed, we sit at the second table to him. No more efficient agency for the transmission of infectious filth of all sorts could have been devised by the most ingenious imagination. He is a perfect joy-ride automobile for bacilli of all sorts. Next to infected water (which our modern systems of public supply are now, fortunately, beginning to get under control) this insect is probably the leading cause of the spread of typhoid fever; as well as responsible for nearly half of the summer diseases of infancy. As the fly breeds only in household and barn-yard filth of human production, strict cleanliness will exterminate him entirely.

He is the deadliest wild animal, the most ferocious beast of prey, that the human species has to contend with; he destroys more human lives every year than all lions, tigers, wolves, and venomous serpents put

together. We always did hate a fly; now we know why.

The war against insects and vermin of all sorts has been one of the features of the decade. The deadliest enemies of the race are bugs and bacilli—the "big bugs, and little bugs upon their backs to bite 'em."

The word has gone forth that not merely must the typhoid fly be destroyed from the face of the earth, but also the stegomyia mosquito that carries yellow fever, the anopheles (his cousin who transmits malaria), the tsetse-fly that carries sleeping sickness, the rat that carries plague, and the mouse that probably carries measles and typhoid fever. It is barely ten years since those martyrs of science, Carroll and Lazear, proved by laying down their lives that yellow fever was carried by the bite of a mosquito. By use of this knowledge, yellow fever has been practically exterminated in Cuba, in Panama, and in other parts of the West Indies and Central America. Our continent is now practically safe from those successive waves of this pestilence which in the last century totaled half a million cases, with 100,000 deaths in the Southern States. The only epidemic that has since attacked New Orleans was stamped out in less than half the usual time, and with one-tenth of the usual mortality. The tropics are now open to white colonization for the first time since the dawn of history.

Even pfallagra bids fair to fall into the insect-borne class, as the latest investigations (both American and European) unite in showing the baselessness of the belief in its causation by spoiled corn, thus refuting a slander upon our greatest crop, and the strong and increasing probability that it is due to the bite of a gnat or midge (*simulium*) whose activities in the early spring produce the well-known seasonal outbreaks or relapses of the disease.

Another famous discovery of the last decade is that of the notorious hookworm. It is simply appalling to realize that probably from 15 to 30 per cent. of the rural population of the Southern States of America are constantly inhabited by this parasite. But since it is as curable as it is common and can be prevented by the most rudimentary improvement of sanitary conditions, we may congratulate ourselves upon the enormous addition to the happiness and economic efficiency of that section of the