

# PLAINING OUR BABIES from an UNSEEN FOE



Dr. Simon Flexner, Who is Using Monkeys to Conquer Infantile Paralysis

## Infantile Paralysis is the Disease that May Soon Be Conquered by the Aid of Monkeys

Dr. J. Madison Taylor, Who Has Fought the Disease

upward in June and July, indicative of the immense increase in the number of babies falling prey to the invasion of the unknown enemy, many doomed to a death that may be deemed merciful when compared to the distorted existence which must be dragged out by the majority who survive.

The fearful increase in the number of cases in New York alone during the last decade exhibits, peculiarly, the intensification of virulence as conditions become epidemic. In 1899 there were 130 cases, with 5 deaths; in 1900, 240 cases, with 9 deaths; in 1901, 50 cases, with no deaths; in 1902, 80 cases, with no deaths; in 1903, 80 cases, with 9 deaths; in 1904, 450 cases, with 40 deaths; in 1905, 890 cases, with 60 deaths; in 1906, 1345 cases, with 75 deaths; in 1907, 1165 cases, with 67 deaths; in 1908, 1689 cases, with 93 deaths, and last year, 2023 cases, with 335 deaths.

Worst of all, blindly as the physician must fight the invader, its presence is among the most baffling mysteries his art is ever called upon to determine. Until the last great stride is made and the vaccine or immunizing serum shall have been produced, this blighting germ has at its mercy any child within whose ordinary defenses it may chance to penetrate.

"No disease is more difficult to diagnose," said Dr. J. Madison Taylor, one of the foremost authorities on children's diseases in this country. "It begins, like any other acute disturbance of health, with sudden vomiting and high fever."

"For three or four days it is next to impossible to know the nature of the disorder, and by that time it has already wrought more or less serious havoc in the nerve centers. In a city like Philadelphia dozens of cases might occur within a single day, none of them apparently due to transmission, and yet frequently two and as many as three cases developing in a single family."

### MAINE SUFFERED YEARS AGO

"I myself reported one such epidemic in Maine ten years ago. My assistant, Dr. McComb, reported the cases occurring two years ago in Philadelphia, not only in my clinic but at the Children's Hospital. My recollection is that there were 250 cases in Philadelphia during that outbreak."

"The disease is so distressing in its nature, sometimes fatal and always leaving in its trail paralysis, that the medical profession will eagerly welcome any hope of even mitigating the severity of its symptoms. Physicians look with the utmost confidence to such research workers as Flexner—equipped as he is with ample means and every appliance to carry on these most necessary experiments—to give aid here, as he recently aided in the fight of humanity against diphtheria, the so-called epidemic cerebro-spinal meningitis."

That the modern advance secured by the use of monkeys at the Rockefeller Institute may result in recovering some actual means of prevention and control of the disease in spite of the apparently insuperable difficulties referred to by Dr. Taylor, was evident from the opinion expressed by Dr. Alfred Hand, Jr., of

late monkeys. While they were able to transmit the disease to two monkeys, they were absolutely unsuccessful in perpetuating the transmission down the simian line. That meant an impassable ravine in their pursuit of the poliomyelitis germ.

Doctor Flexner and his associates had been at work on the search in 1907, but it was not until September of last year that they secured suitable material from two cases in human beings that had proved fatal.

Landsteiner and Popper in their experiments injected the disease-producing material, as obtained from the spinal cords of two children who had died, into the peritoneal cavity in the monkeys. At the Rockefeller Institute the brain was chosen as the place for inoculation, which was made through a small trephine opening, under anesthesia by ether.

The results accomplished all that previous experiments failed in. Not only did the simians develop the characteristic spinal lesions of poliomyelitis, but the virus obtained from those animals was carried successfully through a series of monkeys.

"Now that successive transfer of the active agent of the disease has been accomplished," says Doctor Flexner, "any doubt of its infectious origin can hardly longer be maintained."

Less than a month later, having carried the experiments further, Doctor Flexner presented a more brief but more emphatically encouraging report, for he had produced the disease in monkeys under precisely the conditions where others had failed, and had proved it

can be produced in yet other avenues of infection. He stated:

"The conclusions to be drawn from the experiments are that the virus of epidemic poliomyelitis is readily transmissible from man to monkeys and from monkey to monkey, by way of the brain, the peritoneal cavity and the circulation; and that, however transmitted successfully, it becomes established in the spinal cord and medulla, where it sets up characteristic lesions. The lesions are followed by equally characteristic effects that exhibit themselves in the usual symptoms of infantile paralysis in human beings."

"Moreover, it can now be stated that this experimental form of poliomyelitis in monkeys is a severe and very often fatal disease, and when recovery takes place there persist residues of paralysis which resemble the paralytic effects also persisting in human subjects."

While it occurs sporadically from time to time in nearly all communities, the danger of an epidemic appears to be always present, especially during warm weather. The month line usually shows a sudden leap

# Can Children be Raised Like Crops?



Prof. W.A. McKeever, of the Kansas State Agricultural College

## The Son of God.

I  
Out of Infinity,  
Born from Eternity,  
Came once a Child from the  
Father above.  
Low in the manger he  
Lay where Great Destiny  
Named him forever the  
Savior of Love.  
II.  
Child of Immensity,  
Sent to show you and me  
How that we too may be  
Saviors of men;  
Binding the broken heart,  
Breaking the bonds apart,  
Bidding the downcast start  
Upward again.  
III.  
Deep as Infinity  
Broad as Eternity  
Great as Immensity,  
Being of thine!  
Thou art the Life, the Way,  
Thou art the Truth to day,  
Thou art the Love for aye,  
Perfect, divine!

William A. McKeever

Rec. Simple of a Post Card, Sent Out by Prof. McKeever

them at just so much per year there would accrue a profit from their labors as from the labors of a plow horse. In some cases the extreme economy of their raising made them little better than a part of the farm machinery—to be worked to the best interests of the soil and the buildings thereupon.

So, when a teacher in an agricultural school, which devotes its whole attention to the improvement of grain, stock, fruit and soil within the limits of the state—when he says that swine are minor insects and children of major importance, it is decidedly an innovation.

The states, the government and the schools of the country interested in the improvement of farms and farm methods have been sending out tons of literature to all quarters of the Union so that farmers might have the information that would help them make the most of their farms.

Professor McKeever, who was privately interested in the improvement of the men and women, who lived on the farms and raised the children, had never been famous and popular as an agent of Hymen, and in the hour of need he was secretly sought out by hundreds and implored to continue in his good office. Not did he refuse. So, quietly and unostentatiously, the wedding went on, until at last Claudius heard of it. Great was his wrath. Courtiers warned him that the priest was too powerful to tamper with, and reminding him of good works in the past, but nothing could move the emperor from an avowed purpose of punishing Valentine for his violation of the edict. So the unfortunate man was thrown into a cell, and soon languished and died.

Upon his birthday, the story-tellers say, was founded the present holiday and the custom of transacting the very important affairs of the god of love on this occasion. The story is not touching, but it is a satisfaction to know that it may have occurred that way and to believe that St. Valentine sacrificed his life in the service of lovers.

the Children's Hospital in Philadelphia, whose experience in infantile diseases has been extensive.

"If Doctor Flexner, having succeeded in the transmission of the disease to monkeys, prove fortunate enough to find the exact, the special cause of poliomyelitis, we will learn the proper means to oppose its spread. It is also possible that he may produce some special serum or antitoxin for its prevention. These fresh advances are not merely possible; they are probable."

"The specific germ of infantile paralysis, while it would not seem to be a bacillus, may be a bacterium of some order so small that our present means of detection are insufficient. The bacteria include bacilli, or rod-shaped organisms, which the microscope is usually able to reveal; the cocci, round spores or balls, that may be too minute for ordinary perception; and several other forms whose size and character make them extremely difficult of discernment."

"Yet Pasteur never beheld, never identified the germ of rabies, which he successfully destroyed by preparing his vaccine culture through the use of infected tissues. Poliomyelitis may prove to be analogous, in that science may give us its antitoxin while no man has ever identified a single bacterium that causes the disease."

"The disorder is most difficult of diagnosis, and the damage has usually been accomplished when the diagnosis is assured. If the disease strikes at the respiratory center, the patient dies. While it remains sporadic the mortality is not great; the germ seems to gain in virulence as the disease becomes epidemic."

"The consequences, however, are always to be dreaded. Nearly all cases of club feet, except those due to congenital defects in the bone, are the result of infantile paralysis. Sometimes it paralyzes both legs; again, it ruins the nerves and muscles of the arm and chest, and the child grows up with distorted spine and one side fearfully misshapen."

"The only alleviation of the paralytic affliction is regular exercise of the damaged parts, under the most careful direction, in order that the nerves and muscles which remain may be developed to the extreme compensation possible for the loss."

"When science has made sufficient progress to put into our hands the means of prevention, such as the immunizing serum of diphtheria, the time will be at hand when in the presence of a poliomyelitis epidemic, children can be safeguarded by immunization, with the approval of parents and the attending physician. We may in that time be able to prevent infantile paralysis. Already it is possible to absolutely stamp out in any institution an epidemic of diphtheria."

## Who Was St. Valentine?

WHO was St. Valentine? It is an old name, older than the civilizations of modern Europe, and doubtless a Roman name, although there are Valentines in the heraldic charts of a dozen peoples. Again, there are several saints of the name in the calendar, and tradition has it that the real Valentine who guarded lovers' interests, and won immortality among the young folks thereby, was not a saint at all.

Some people say that St. Valentine's Day in the early church simply coincided with a pagan festival of ancient Rome, and that the two holidays had nothing to do with each other. When the names of the Roman gods who graced the pagan rites were forgotten, the Christian name of a saint who, perhaps, knew nothing of love's trials became general. But the rites themselves lived on, and were only modified to suit the tastes of following generations. This is one explanation.

The Roman holiday which was most likely swallowed up in the saint's day was the festival of Pan, which came in February. Pan was the half-wild, hoofed god of nature, and it is a tribute to the insight of the ancients into human nature to believe that they saw how fitting it was that love affairs should be conducted under the patronage of the god of nature, natural impulses and natural instincts. At any rate, poor old Pan is well forgotten in the modern celebration of the day, and the whole affair has been put into the hands of Cupid, while even the good saint, whoever he was, is quite ignored.

There is another story which accounts for the origin of the feast day, and at the same time identifies the saint, giving him all credit and some standing in the calendar. It is a story of imperial Rome in the reign of Claudius, about the year 45 A. D. Claudius was fond of war, and perished in stirring up a continual tumult on the borders of his most distant provinces. Armies were continually in the field.

Rome was drained of its best men to be sent thousands of miles where they could do no good, and to gratify the whim of a tyrant. The absence of the men over months and years. Meanwhile mothers, wives and sweethearts pined and lost hope of ever seeing them again.

At last Rome was sick of it. No more men would go, and Claudius, who was shrewd enough to see that his chiefest enemy in the existing state was love, promptly forbade marriage—having no fear of race suicide, for Rome was overpopulous. Imagine the wail that went up among the fond and aching-hearted. Parents were bribed, and couples found refuge on foreign shores.

In the midst of it all came Valentine. Now, Valentine was the high priest of a Greek temple that stood near the imperial palaces in Rome. He had never been famous and popular as an agent of Hymen, and in the hour of need he was secretly sought out by hundreds and implored to continue in his good office. Not did he refuse. So, quietly and unostentatiously, the wedding went on, until at last Claudius heard of it. Great was his wrath. Courtiers warned him that the priest was too powerful to tamper with, and reminding him of good works in the past, but nothing could move the emperor from an avowed purpose of punishing Valentine for his violation of the edict. So the unfortunate man was thrown into a cell, and soon languished and died.

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ing the Boy in the Choice of a Vocation." They sound commonplace, perhaps, but these are things that every one knows all about; but the professor of philosophy has unearthed some data, and gives a wealth of experimental results that make his simple admonitions impressive, and are calculated to make the agrarian think twice of his family and once of his prize steer.

In his pamphlet on cigarette smoking he tells of the effects of the habit which prevails among youngsters on each of the organs affected. He gives charts showing brain action under the stimulus of tobacco. He tells of its direct bearing upon memory, incorrigibility, vagrancy and general moral decrepitude. Cases are cited, means of prevention and possible cure are presented—in fact, every effort is made to demonstrate to the parents the importance of a little supervision in the "bringing up" of their boys. It is all clear and logical, and fairly forces upon the reader a sense of responsibility for the care of his children's health and purity.

The saving habit is made an equally vital point in the second pamphlet, "The Criminal is Nearly Always a Spendthrift; there is something in the very nature of the reckless money habit that tends to drag one down to wrongdoing," says Professor McKeever. He would teach children prudence and thrift in their own honest business instincts, by giving them something to save. Among farmers, he says, the boys do not get enough money. The father looks upon them as an investment, and the shining quarter at Christmas and on the fourth of July is regarded as a bit to spend joyfully. So in time, when all the farm and the carefully hoarded money are his, the lad is inclined to spend it on a manna just as joyfully.

In addition to the bulletins, postcards with poems by Professor McKeever are sent out in large numbers, raising children and not merely letting them grow up. The little things that may be instilled into boys and girls that will grow into virtue and form the basis of strong, worthy character in maturity. It is teaching the West, and incidentally the world, the folly of improving the land and its products and glorifying over the returns, while the men on the land and look for no returns in manhood, honesty and culture.

"IT is more important that we have fine cattle, abundant crops and well-fattened swine than that we rear children who will develop into well-rounded, capable men and women!" sarcastically queries Professor William A. McKeever, of the Kansas State Agricultural College.

Hogs may come and hogs may go, but the children go on forever, thinks the professor. So he would teach the western farmer to raise good children in the first place, and take more pride in his sons and daughters than in his fat cattle.

"The wealth of the West has been too long measured by its output in stock and grain. It is time that the West takes account of its men and women." So says the professor of philosophy who was the first to issue bulletins on child-raising in the same manner as information regarding the upbringing of porkers is disseminated.

Professor McKeever realized that there was too much of a tendency to look upon children as draught animals; to calculate that by feeding and clothing

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