

fects experimentally, followed by discovery of the causative spirochete, and the drug salvarsan, so remarkable in its curative action. That the spirochete is a parasite, adjusted to living tissues, is clear from the experimental investigation of animals. Coming to the research work of Noguchi the *S. pallida* has yielded to artificial culture. Flexner is truly a master mind in all that concerns poliomyelitis, or infantile paralysis, epidemic in northern Europe for many years, has within the past five years about encircled the globe, the Scandinavians being first in the field, to recognize its essentially infectious nature. The natural spontaneous disease, and the induced disease, in monkeys are so alike that microscopic study of the spinal cord and brain defines the changes as identical. The virus of poliomyelitis is remarkable, as the activity of a filtrate of a portion of the spinal cord of a recently paralyzed monkey, made into an emulsion with sterile distilled water, will transmit the disease, and a fraction of a cubic centimetre will cause paralysis, and death. The first filtrable parasite was discovered by Loeffler 14 years ago, in fluid lymph obtained from the vesicles of cattle, with foot, and mouth disease. Fully eighteen diseases, chiefly of cattle, are now known and caused by minute living organisms. These are human yellow fever, dengue, and poliomyelitis. The maladies in domestic animals are foot and mouth disease; horse sickness, cattle plague. The viruses producing these diseases are now subjects of careful research, and in time the entire problem will be defined. In poliomyelitis the conclusion is that the virus ascends by nerves of smell to the brain, and then to cerebro-spinal liquid, and thus carried to the entire body, so the nasal mucous membrane is actually the site both of ingress, and egress, of this disease. The most frequently observed coincidental paralytic diseases are between hens and human beings. Death in this disease is caused solely by paralysis of the respiratory function, without obscuring consciousness, almost to the very last. As to cure, no serum so far has more than touched the edge of this disease. As a remedial agent Urotropin, said to possess antiseptic action, is now under careful consideration. In 1876 Huxley lectured in Johns Hopkins on biological science, and what a remarkable advance since his day, in the whole domain of bacteriology. An interesting feature in poliomyelitis is its close association with insect life. At present the Massachusetts Board of Health and Harvard University are investigating the life history of the "stable fly," *Stomoxys calcitrans*, as a carrier of this disease. Dr. Rosenau, of Washington, states that the stable fly can take up the virus from blood of infected monkeys and reinoculate it into healthy ones, which will become paralyzed, thus establishing the fact that this fly actually carries the virus of the disease.