

Thus, a pupil of Trasbot's³⁹ swallowed the false membrane of several hens without contracting diphtheria. Megnin⁴⁰ never observed diphtheria among those who took care of diphtheritic birds. Rivolta,⁴¹ discussing the observations of Gerhardt, said that the false membranes of fowls were not diphtheritic, but croupous, and that if the epidemic observed among the employees at Nesselhausen had been true diphtheria, it would not have remained localized, but would have spread to the environs. It was possible that the infection was transmitted by the fowls to man, but it was not diphtheria, but a slight attack of croup.

Sante Sirena,⁴² studying the same epidemic reported upon by Chicoli, declared that he never saw a case of the transmission of the disease from birds to man, and that never had the cases of human diphtheria in Palermo been so rare as at the time of this epidemic. Loeffler,⁴³ the discoverer of the human diphtheria germ, was never able to produce diphtheria in fowls by the inoculation of the true bacillus; and Colin⁴⁴ obtained the same results. Nocard⁴⁵ denied the identity of the two diseases; and St. Ives Menard⁴⁶ considered the false membranes of fowls quite different from those of man, and had never seen cases of the transmission of the disease in the "Jardined" acclimatation of Paris." Straus had never observed cases of diphtheria among those who took care of diphtheritic pigeons. Gratia and Lineniaux⁴⁶ had one favorable result from the administration of diphtheria antitoxin to a diphtheritic chicken; but in all other cases the results were negative. These authors concluded that the inefficacy of this remedy for poultry was an argument against the identity of the avian and human forms of diphtheria.

It is impossible to bring into agreement all the data furnished by the above experimenters, unless we admit that the diphtheria of the birds is either produced by several different species of bacteria and perhaps coccidia, or that under the name of diphtheria there has been, as Galli-Valerio⁴⁷ remarks, "a lamentable confusion of different affections." We know that infectious pseudo-membranous inflammation of mucous membranes may be caused by the streptococcus pyogenes, staphylococcus pyogenes, and other bacteria; and many of the disorders caused by these organisms resemble very closely the local and general phenomena of diphtheria caused by the Klebs-Loeffler bacillus; and if such is the case in the human subject, it is more probable it is also true of birds.

Seeing, therefore, that the research from the etiology (physical cause or causes) of diphtheritic affections of birds was so incomplete and so controversial, we have given this subject con-