

AN EPIZOOTIC OCCURRING AMONGST PARTRIDGES.

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IN the year 1901 an epizootic occurred amongst the partridges on a large estate in Wiltshire. The part of the estate upon which most of the birds were living consists of grass upland, very sparsely inhabited; through it no drainage system runs.

The birds were partly wild bred and partly hatched under fowls, but the incidence of the disease fell chiefly upon the home-bred birds, originating apparently with these latter. These home-bred birds had not been hatched in the immediate neighbourhood of a cottage, being usually about two or three fields removed from any habitation. They were fed several times daily by a keeper, but none of the keepers nor any member of their families were known to have been ill. The first deaths were noticed towards the end of July 1901, by which time the young birds were well-grown and strong. The first symptoms observed were that the birds refused food and moped about, and soon lay down and died; the average duration of illness being about twenty-four hours. So severe was the disease amongst the home-bred birds, that out of 350 eggs hatched only about forty partridges survived. The percentage of mortality was not nearly so severe amongst the wild birds, and there was good reason to believe that they had been infected later. The hens which had acted as foster-mothers were unaffected. In the birds which were found dead a pseudo-membranous formation was seen at the back of the throat, and conjunctivitis was not infrequent. No ulceration was seen on the bodies. One of these birds was examined post-mortem, and a bacteriological investigation undertaken, which revealed the following:—

A post-mortem examination of the partridge showed that a destructive pan-ophthalmitis had existed, with destruction of the cornea and escape of the contents of the eye, with injection and ulceration of the conjunctiva. There were no other external lesions observed. The pharynx contained a pseudo-membrane. Just within the larynx there was membrane with injection of the laryngeal mucosa. This condition was continued down the trachea. Cultivations were taken from the eye, pharynx, larynx, and heart blood. The eye cultures after incubation proved to be overgrown with a putrefactive bacillus, probably one of the proteus group. In the cultures from the pharynx and larynx the bulk of the growth consisted of staphylococci, but with these were a few rather short, round-ended, evenly staining bacilli, which resembled the bacillus described as found in cases of diphtheria in pigeons (*B. columbarum*).

The heart-blood cultures remained sterile. In view of the importance of properly identifying the organism which caused the disease, the cultures were sent to Dr. Moore for inoculation; he forwarded the following report:—

“The cultures were inoculated with the following results:—(1) A guinea-pig inoculated with the larynx culture died within twenty-four hours; post-mortem, there was very marked hæmorrhagic congestion at the site of inoculation, with enlargement of the neighbouring glands, but nothing special to note internally: no serious effusion and no congestion of internal organs. Cultures closely resembling that injected were obtained from different parts, those from the site of injection, from the spleen, and from the blood are returned. (2) The pharynx culture injection merely resulted in a local inflammatory reaction, and the animal continued otherwise quite healthy. In view of the source and nature of the disease, the following experiments were performed with these cultures. (3) An inoculation was made into a pigeon by scarifying the mucous membrane of its trachea and rubbing the abraded surface with the culture from the larynx of the partridge. On the part so treated a whitish membranous formation took place at one point, projecting out prominently from the tracheal surface. So far, however, the bird's general health continues quite unaffected, and should this continue an attempt will be made to obtain cultures from the affected part by detaching the growth. (4) Another pigeon similarly treated with the pharynx culture remained completely unaffected both locally and generally.”

No further report from Dr. Moore came to hand. The cultures obtained from the guinea-pig which died were examined, and it was found that the original bacteria were still present, and in the same proportions. We consider that the epizootic disease was due to a local inflammation of the pharynx and larynx, and was not of septicæmic type: in this respect it corresponded to diphtheria, but must not be confounded with that disease.

In consequence of the epizootic, the breeding grounds were altered in 1902, and there was no recurrence of the disease, nor has there been any since.

We publish this short communication in the hope that it may be useful to those who are collecting notices of epizootics.

It is an interesting coincidence in connection with this epidemic, that towards the end of 1903 a child (æt. 4 years) of the keeper who had charge of the birds, contracted diphtheria and died. The cottage in which he lived is situated in the middle of a wood, and close to the field in which the infected birds were reared. It is quite isolated, and there had not been any case of diphtheria in the neighbourhood for many months, nor had there been any previous incidence of sore throat in the district.