

Paper No., 17.

PIROPLASMIC INFECTIONS OF CATTLE IN EGYPT.

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1. Importance of piroplasmic infection of cattle in Egypt. Types of piroplasmides observed in recent researches.

2. Primitive piroplasmic infections. Immunity and consecutive resistance to first infections.

3. Latent piroplasmic infections. Reservoirs of virus. Recidivism. Complications with other diseases.

4. Piroplasmosis in indigenous cattle and cattle imported from safe areas. Difficulties experienced in Egypt in connection with the importation of cattle intended for breeding purposes and the improvement of the breed, and means for obviating these difficulties.

5. Piroplasmosis caused by the *Piroplasm bigeminum bovis*. Pure and mixed infections, especially with the *anaplasma marginale*. Recidivism of piroplasm bigeminum, especially during inoculations against pest.

6. Piroplasmosis caused by *Babesiella bovis* or babesiellöse. Relation between the Egyptian *Babesiella bovis* and babesiellas observed in Southern Italy and in Libya, and varieties observed in Algeria under the name of *B. berbera*.

7. Piroplasmosis caused by *Gonderia bovis* or Gonderiosis. Importance of infection and morphological characteristics of the parasite in question as compared with those of the same type observed in Eritrea, Libya, and Italy.

8. Piroplasmosis caused by *Theileria annulata* or theileriosis. Morphological and biological relations with the same parasite observed in Libya and with *Theileria* observed in cattle in Eritrea.

9. Relation between *Theileria annulata* and *Gonderia mutans* as regards:

- (a) morphological characteristics;
- (b) presence of plasmic bodies of Koch;
- (c) pathogenic action on the indigenous cattle and on those imported from outside.

10. Piroplasmosis caused by the *anaplasma marginale* or anaplasmosis. In Egypt this disease occurs:

- (a) in the pure form;
- (b) complicated with the piroplasmosis bigeminum and with gonderiosis.

The elements with the aspect of anaplasma which may be found in the blood-stream of sick cattle can be of various nature, i.e.:

- (a) products of the alteration of the erythrocytes and of the advances of the nucleus (*advances nuclearises*);
- (b) states of the evolutionary cycle of certain piroplasma (*Babesiella, Gonderia, Theileria, Nuttalia*) which are commonly called anaplasmic forms;
- (c) the parasite proper.

Can we, merely on the basis of the difference in acuteness of the disease, the variability of the position of the parasite in the red corpuscles, and the variable dimension of the parasitic elements themselves, stick to the four kinds of anaplasms, i.e. marginal, central, Argentinian, and Rossicum?

Paper No. 18.

CONTAGIOUS PLEURO-PNEUMONIA OF GOATS IN EAST AFRICA.

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CONTAGIOUS pleuro-pneumonia is without doubt the most serious and most prevalent of goat diseases in Eastern Africa. It ravages most of the native herds every year and causes immense loss. Unfortunately, it does not spare imported breeds, and many settlers who have experimented with imported goats as a dairy proposition have experienced heavy losses.

The disease has been diagnosed throughout the various parts of Kenya. It also exists in the Belgian Congo, where native breeds are said to be immune (van Saceghem); in Uganda, and in Tanganyika. It has also been investigated in India where it ravages the native herds in the Kangra district of the Himalayas. Reference to any text book will show that the disease has been observed in most of the countries forming the Mediterranean littoral. In the past much confusion has existed as regards the identity of contagious pleuro-pneumonia with the so-called "boufrida" of Algeria and with the infectious pneumonia observed in septicaemia haemorrhagica. From recent research it has been conclusively shown that there are only two infectious caprine pneumonias, viz.: (a) the pneumonia of acute caprine haemorrhagic septicaemia, and (b) contagious pleuro-pneumonia, and with the latter must be finally identified the pneumonia studied by Leclainche, Mori, Pusch, Storch, Holzendorf, Polger, and Krusche in France, Spain, Thuringia, and Austria respectively.

The specificity of caprine contagious pleuro-pneumonia may be proved by the impossibility of infecting other animals than goats with pathological material while in the infectious pneumonia of caprine septicaemia haemorrhagica, sheep, rabbits, and mice may be successfully inoculated with pneumonic tissue.

From time to time sporadic outbreaks occur in this Colony of a disease which clinically and pathologically resembles the condition described in the United States by Mohler and Washburn as "Takosis." A simple broncho-pneumonia is found at post-mortem, but there is no difficulty in distinguishing it from the pulmonary lesions of contagious pleuro-pneumonia. Another type of pneumonia observed at the laboratory recently was found in goats used for the production of rinderpest virus. As is well known, in sheep and goats rinderpest is manifested by pathological changes in the lungs and chest. This fact has also been noticed by Edwards in India. Sheep and goats are not very susceptible to rinderpest, but is is not precisely