their principal use is to furnish by their dissolution in the gastric bag of the third stomach or gizzard, the salts of lime, of albumen, and of silex. This opinion is the result of experiments we have made on this subject. In depriving for four months some fowls of all sorts of stones or sand, we remarked that the shells of the eggs were much thinner, and that the albuminous white of the egg was much more liquid than in the eggs of fowls which had their liberty. The yelk showed no difference. Are we not to conclude from this fact that the hen seeks for stones and sand, especially those of carbonate of lime, by natural instinct, so as to procure for her economy the salts indispensable to her existence, and for her eggs the elements necessary to the formation of the shell?"

The ventricule succenturie secretes the gastric juice and represents, according to that view, the real stomach. The intestine which completes the digestive canal of the hen joins on to a cloaca, that is to say, a pocket into which also open the ureters bringing the urine, and the canal which forms the passage of the egg to be laid. The urine mixes with the excremental matter which proceeds from the intestine, and these are ejected altogether. The urine of birds is always concrete; it is composed of uric acid and sundry urates; in the droppings it forms the white matter that detaches itself from the dark portion, which is the real excremental part.

The salivary glands are small in fowls, and produce a liquid thick and slimy, but the quantity is very small.

The liver is very large, and divided into two lobes of equal size. The gall bladder is large and contains a thick bile, very bitter, which gives the flesh a very disagreeable taste, if the fowl is not drawn soon after it is killed. As to the sorroundings of the digestive apparatus, it is sufficient to say that the pancreas, or pancreatic gland, in gallinaceous birds is very much developed. This pancreas pours the pancreatic juice, like the liver, into the intestines by two small tubes in the centre of the doudenum, far from the pylorus, which facilitates the intestinal digestion.

The spleen is very small, of cylindrical shape, and placed behind the liver. Its functions seem to be to keep in reserve and prepare the blood used as one of the secretions necessary to digestion.

The circulatory apparatus offers no important difference from that of mammals. It exists, as in the case of the latter, by means of a heart with four cavitis, and the distribution of arteries is the same. Their blood is, however, a little warmer, and contains elliptical globules of small dimensions.

Respiration takes place by lungs, which are found in the posterior and superior part of the breast, adhered to the ribs, and maintained below by a resisting membrane moved by muscular power to work the inhaling and breathing out process. The lungs are pierced with holes, so as to permit the air to circulate in all parts of the body, even in the cavities of the bones. The air is brought into these organs by a very long aerial tube, of which the windpipe and bronchia possess complete cartilaginous rings. But the most singular disposition of the respiratory apparatus of the fowl is the existence of large cells of air in the breast and lower part of the abdomen, which goes to show that the hen requires and absorbs in her interior a quantity of air much larger in proportion than with mammalia.

With all birds the aerial reservoirs are nine in number, viz.; the thoracic bag, placed in the interior part of the thorax; the two cervical reservois, situated at the base of the neck; the two anterior diaphragmatic reservoirs, placed between the two diaphragms, behind the preceeding ones; and finally the two abdominal reservoirs placed against the superior wall of the abdomen. Of these nine reservoirs, the first is single or symmetrical, the others are double, and disposed equally on each side of the median plane. No doubt these numerous vesicles, filled with hot air at 104° Fabr., lighten the body of the hen when she flies, but M. La Perre de Roo does not affirm that this is the only use, as the domestic fowl never flies to any height in the air.

The skin of the fowl is covered with feathers. Each feather is composed of a stem, the base of which is hollow, and inserted in the bulb; and barbs which are furnished with down, hardly visible to the naked eye. The integumental appendages are well adapted to retain bodily heat. The feathers completely covering the skin of the her, it cannot be said that she is sensitive to a delicate touch; and the tongue is the only organ subject to the exercise of any sense of feeling.

The nostrils are open at the base of the beak, but whether the sense of smelling is developed in the fowl or not, we know absolutely nothing.

If we were to judge by the rigidity of the tongue, by the scarcity and viscous consistency of the saliva, we should say that the sense of taste was very little developed in the fowl. However, it rejects with astonishing sagacity the less desirable grains both before and after being taken into the beak.

The sight in poultry is incontestably very piercing. They spy at a great height the bird of prey which soars above, and give out immediately a cry of alarm, which is understood by ducks, pigeons, and all the other denizens of the poultry yard. The globe of the eye is protected not only by two eyelids of vertical motion, as it is seen in some mammalia, but also by a third, called "blinking membrane," which has its existence from the internal angle of the eye, and which can be drawn from inside to outside over the eye. The cornea is strongly convex, the crystalline is flat, and the vitreous body is small.

The ear of the hen is deprived of the concha, or larger cavity of the ex-