S U M M A R Y

This paper is the result of six years' work in the study of bibliographical references in the field, as well as the gathering, processing and interpretation of data and samples about and from hunting animals, most of which were shot or died.

The paper has two parts. The former part is entitled "Bibliographical data concerning the bioecology and pathology of the hunting species in Romania", and comprises three chapters as follows:

Chapter 1, "The bioecology of a few hunting species in the north-east of Moldavia", deals with the most important species from a cynegetic point of view in the researched area.

Chapter 2, "The morphology of the basic pathological processes in hunting species", discusses the dystrophies, the disorders of the local circulation and the inflammations in the hunting species.

The third chapter in Part 1 is entitled "Etio-morpho-clinical aspects in the hunting species" and enlarges on 15 of the most important diseases of the game, some of which have been diagnosed in the northern area of Moldavia as well.

The second part, dedicated to personal research, is also divided into three chapters.

Chapter 4 of the paper (the firs chapter of the second part is entitled „Research regarding the epidemiology of rabies and trichinosis in hunting species.

Chapter 5, "Morphopathological research in the hunting species", is in its turn structured on two sub-chapters. The first makes reference to the "Materials and methods" and describes the laboratory methodology used in processing the samples. The second sub-chapter is named "Results and discussions" and describes the most important lesions in our research.

Chapter 6 – the last one -, entitled "General discussions", is a synthesis of the results obtained, followed by Conclusions and a bibliographical list.

The paper has 253 pages. I have studied 151 articles and books in the process of writing it, as can be seen in the bibliographical list.

During the hunting seasons 2002 – 2007, organs from 141 animals of various species were gathered for research. Mention must be made that during this time there were interruptions due to the ban on hunting birds during the episodes of avian flu which occurred in our country. This obviously slowed down the process of working on the paper. Last but not least, the research was perturbed by my having to change work-places. Upon my leaving DSVSA Suceava at the beginning of 2005, I no longer had access to the state Veterinary Laboratory Suceava, while at the same time my present job, being more stressful, involves frequent official trips, which led to a decrease in the amount of time allotted to the present paper.

As for the epidemiology of rabies in the north-east of the country, the evolution of this disorder was followed in the counties of Suceava, Botoşani, Bacău, Neamț, Iaşi, and Vaslui between 1993 and 2004. In all the above-mentioned counties, where research was done, rabies was diagnosed, especially in the form of foxes rabies: 111 cases (81%). The first place was occupied by the county of Iaşi with 25 cases, Vaslui with 21 cases, Bacău – 18 cases, while the fewest number of cases (16) occurred in the county of Neamț. In the county of Neamț, rabies was diagnosed after 1999.

Trichinosis in hunting animals is mentioned on a regular basis in the literature in wild boars and bears, while it is found quite rarely in other species. In wild boars and bears, it occurs between 0.14% after Nesterov (1991) and 0.15% after Ionescu (1996). Our findings in the five counties under research showed that the disease did not occur in the counties of Botoşani, Iaşi, and Vaslui, and that it is on the decrease in the counties of Suceava and Bacău. Of the 3774 muscle samples taken from wild boars in the county of Suceava, 149 (0.39%) were positive, the highest degree of positiveness (22%) being in 1993.

The 141 animals from which samples were taken were: 21 wild boars, 23 hares, 8 roebucks, 1 chamois, 8 foxes, 2 wolves, 72 wild ducks, 2 sparrow-hawks, 2 ravens, 1 eagle owl and 1 partridge.

The histopathologic examinations of the samples taken on 21 wild boars revealed the fact that only 4 animals(18%) were lesion-free. 17 animals (82%) presented various fundamental pathological processes of one or several organs, such as: congestions, hemorrhages, fatty granular dystrophies of the liver and, more rarely, of the kidneys. There were found a relatively large number of pneumonias (47%), especially interstitial pneumonias with lymphoid cells cuffing, known by us as pneumonias caused by *M. Hyopneumoniae* or *M. Suipneumoniae*. We also found infiltrations of the ganulomatous type with a typical evolution from polygranuloma to the mature calcified granuloma, which oriented us to the infection with *Mycobacterium avium subsp. Avium*. Just as frequent as pneumonias were the cases of traumatic hepatitis of a parasitic nature, due to the migration of *Ascaris suum* larvae and other larvae with enteric-liver-heart-lung—tracheo-intestinal migration in the *larva migrans* process, a process mentioned in the literature(Paul, 2001). There was also a case of hepatitis caused by salmonella and rare cases of myocardial sarcocystosis, glomerulonephritis with immune substratum, interstitial myositis, hemosiderotic pigmentary hepatosis, lesions with a reduced pathogenic influence.

The morpho-pathological research were done on 23 hares, of which 8 (30.4%)were within the normal limits. 10 (40.3%) carried some parasitic infestations, with pulmonary, hepatic or intestinal localisations. Bronchopneumonias are caused by various species of *Protostrongylidae* and are characterized by the invasion of the respiratory space by eggs, larvae in various evolutionary stadia, adult parasites, and the reactions of the local pulmonary tissues: epithelial and mesenchymal. The hepatic and intestinal localizations are the effect of coccidiosis, caused by *E. stiedae* and *E. neoleporis*. Compared to the data mentioned in the literature, we underline the modifications of the bile ducts under the influence of the eggs of *E. stiedae* reaching the liver through the lymphatic ducts or through the blood vessels, and which, by penetrating the basal membranes of the bile ducts, affect the bile epithelium from its periphery to the apical pole. In severe infections, while the bile epithelium is being destroyed by parasites, the host organism reacts by the hyperplasia of the epithelial cells, which at one point can no longer be contained in the duct circumference and break into its lumen, bringing the basal membranes in the process.

The duct lumens gain thus a papillary character. There are frequent cases when two opposite papillae join at the apexes and produce a division of the lumen of the bile duct, with the continuing multiplication of the parasites. An afflux of granulocytes is initially observed in the bile ducts, yet, gradually, they are replaced by histiocytes and giant cells. This giant-cellular reaction is mentioned by Tsai and Nang (1994) and taken over in our country from Dulceanu and Terinte by Paul (2001) in about the same year. We did not find in our bibliography any mention of phagocytosis of oocysts by giant cells, a process which we consider of high priority. The giant cells play an active part in the fight against parasitical invasion and contribute to the increase of the granulomatous inflammation in this disorder. A disorder which is not so often met is hepatic fascioliasis, mentioned by Cosoroaba (1082) and Nesterov (1984).

Our research on hunting birds was done especially on the wild ducks (*Anas spp.*) taken in 2002 (15 birds) and in 2006 – 2007 (57 birds). The first samples offered us less significant results, only one case being of importance by the impregnation of two thirds of the liver mass with lead granules, which led to a conclusion of saturnism. As early as 1972, Pecham (1972), cited by Paul in 2000, showed that the wild ducks that get 1 – 8 lead gains of shot can survive variable periods of time. We drew the conclusion that the saturnism found in the duck we observed was the effect of the grains of shot throughout its life.

We also bring up the matter of the lymphoid infiltrations of various intensities dispersed in all the organs, known in birds as “Biggs’s lymphoid and mural nodules”. Their number and dimension is related to the aggressivenes of the habitat (Paul, 1990). The poor quality of the habitat with the possible presence of enteric bacteria may cause hepatic amiloidosis**,** found in one of the cases as well. Much more diversified were the lesions found in the 47 ducks gathered between 2006 and 2007. We particularly mention the presence of numerous cases of parasitical traumatic hepatitis which can be met in the process of larva migrans known in man (Beaver, 1969) and in domestic mammals (Mandelli, 1989, Paul, 1990, Asiminei St., 1998, etc). We did not encounter in our bibliography any of the histopathological aspects presented by us, thus, we consider them of high priority for the Aves Class.

We also draw the attention on some lymphatic cells and hystiocitic cells forms of hepatitis with intranuclaer inclusions, which might be caused by some forms of virosis. For our country, an explanation might be a herpesvirus enteritis of wild ducks, as decribed by Leibovitz (1971), cited by Paul in 1994, as well as other forms of virosis, less known and not found here yet. One certain thing is that wild ducks carry viruses and a deeper study in this direction is an absolute requirement.

In conclusion, we consider the results obtained by us as a more introduction in the study of the morpho-pathology of hunting animals, study which must be continued and which deserves thorough consideration, with a view to enlarging the area of expertise in etio-morpho-pathology.