The myocardium was pale and in the ventricular walls there were some well defined whitish areas (0.2-0.4cm x 0.5-1cm). At the apex there was a white-greyish fibrous area (2cm) protruding from the surface (Fig. 3).

1. Introduction
The generalised amyloidosis of Beech marten (Martes foina) is a metabolic alteration characterised by a diffuse accumulation of amyloid. The disease is well known, nevertheless, it has been described only in some hundreds of animals submitted to post mortem examination in Switzerland and Bavaria (Wandeler & Pauli, 1969; Wandeler et al., 1970; Müller & Rapp, 1977; Sabolic, 1980; Geisel, 1982).

The incidence of the disease ranges from 7.7% to 17% of the animals submitted to anatomopathological examination, without apparent predilection for sex or age (Geisel, 1982). Even if a genetic predisposition has been hypothesised the etiology of the disease is still uncertain (Geisel, 1982). This report describes a case of amyloidosis in a marten captured in Liguria. The animal subsequently died in captivity.

2. Materials and methods
The animal was a young female, about one year of age and was found in a garden in Ventimiglia in September 1991. The animal was in a poor condition, depressed and with evident respiratory difficulties. After 24 hours of symptomatic therapy the animal died. At post mortem samples from the liver, kidney, heart and spleen were taken for histopathological examination and specimens of bone marrow, spleen and liver were collected for bacteriological tests which were performed on blood-agar. Moreover, a direct immunofluorescent test for rabies virus was applied on impression smears from nervous tissues. For the histo-pathological examination tissue samples were fixed in 10% buffered formalin, embedded in paraffin wax, 4µm sections were cut and stained with Haematoxylin-Eosin and Congo red.

3. Results
The animal was in a poor condition. The liver was enlarged with irregular white-greyish areas slightly protrudent (Fig. 1). Cut section reveals that such lesions largely involved the parenchyma (Fig. 2).

Fig. 1 - Liver: irregular white-greyish areas slightly protundent

The myocardium was pale and in the ventricular walls there were some well defined whitish areas (0.2-0.4cm x 0.5-1cm). At the apex there was a white-greyish fibrous area (2cm) protruding from the surface (Fig. 3).

Fig. 2 - Liver: cut section
Upon the histopathological examination the most important lesions were found in the liver, with abundant deposition of homogeneous material uniformly distributed under the capsule, into the walls of the blood vessel and in the portal areas. The hepatocytes showed diffuse degeneration with homogeneous and often vacuolised cytoplasm (Fig. 6 and 7). In the heart a deposition of homogeneous matter within the walls of the arterial and venous vessels of the myocardium was found. In proximity of the apex of the left ventricle there was a large area of necrotic tissue, surrounded by a thick connectival capsule; the arterial vessels around the lesion had a subendothelial deposition of homogeneous matter which in some cases was eccentric while in some others it involved the whole of the vessel wall (Fig. 8). In the kidney there was a deposition of homogeneous matter especially in the glomeruli, while, in the epithelium of the tubules degener-
The nature of the homogeneous matter was identified using Congo red staining. It was characterized by a pale pink colour and classified as amyloid. The bacteriological tests and direct immunofluorescence for rabies virus were negative.

4. Discussion

In the present report, the authors describe the anatomo-histopathological findings of a case of generalized amyloidosis in a Beech marten. Although occasionally described in the literature, the disease has a remarkable incidence as recorded during investigations conducted on a large number of animals. In the case reported, the anatomo-histopathological findings of amyloid deposition in various organs, especially in the liver, spleen and heart which are considered the target organs in generalized amyloidosis are in agreement with the description of the disease given by other authors. Of particular interest are the heart lesions characterized by a large area of necrosis surrounded by a connectival reaction around the myocardial arterial vessels infiltrated by amyloid. Such lesions, probably of ischemic origin, could be due to the occlusion of the afferent vessels. The etiology of this case of amyloidosis cannot be ascertained on the basis of the anatomo-histopathological findings only. Therefore, the nature of the disease is uncertain, even if the cause of death may be due to the serious lesions found in the organs.

References


