Summary

It was the aim of this thesis to find out, by analyzing international scientific literature, which stress phenomena occur in pet birds and domestic fowls and which are the causes. Besides, it was to be demonstrated how the existence of stress can be scientifically measured.

Apart from evaluating more than three hundred publications a questionnaire published in several relevant periodicals throughout Germany and addressed to breeders and exhibitors was also assessed. In addition to this, latest statistics have been considered. Other kinds of stress that occur in the natural environment of wild birds in the form of defending their territories, weather conditions, rivalry in providing food and choosing partners were not the subject of this thesis.

After evaluating veterinary literature published about stress and considering the results of the questionnaire mentioned above it is obvious that every way of keeping birds in human care may lead to various forms of stress.

According to Selye's model of adaptation which is still valid today every alteration in the environmental conditions or in the inner homoeostasis of the individual is a stressor that causes the adaptation syndrome (= sum of all stress reactions) as it is described in Chapter 3. The more physical integrity (=balance of catabolic and anabolic metabolism) is lost because of altered conditions the more intensely this syndrome develops.

According to this fact cage birds as well as domestic fowls are subjected to numerous stressors, which can be grouped as follows:

- stressors caused by human manipulations (= handling)
- stressors caused by being kept inadequately
- stressors caused by hygienic faults and infections
- stressors caused by breeding measures involving genetic changes

Most of the stressors mentioned in the thesis have a permanent influence on the bird's physical situation and therefore demand constant adaptation. Physiological processes caused by this comprise the interplay of all metabolic control systems of the living organism as described in Chapter 3. These stress or adaptation reactions have, in the long run, an effect on one or several of the following factors: → behaviour, → performance, → morbidity and → mortality. The mostly negative changes become obvious and provable as stress phenomena.
The existence of stress can be measured with the help of physiological and ethological parameters. So far mainly hormonal measurements in the blood (corticosteroids, ACTH, STH) are used. Besides, neural mediators (catecholamines) circulation parameters, state of immunity, characteristics of performance as well as mortality are measured. Ethologically important measures are behavioural disorders, fits of panic or tonic immobility reactions.

Summarizing this it becomes clear that birds are subject to various stress situations in nearly all contacts with people in economic as well as in private keeping. As every stress situation means a complex interplay of many single factors, as many parameters as possible have to be measured and to be included in the evaluation for a scientific assessment.