VETERINARY WILDLIFE DATABASE

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INTRODUCTION

The Price Forbes Chair in Wildlife has a mission: To foster wildlife veterinary science through education, research and communication, and in so doing to contribute to the maintenance of biodiversity and the sustained utilization of this country's natural resources. The development of a wildlife diseases literature database is intended to make a contribution to the fulfilment of this mission by promoting knowledge and communication in this field of veterinary science.

The *Reference Manager* software was introduced to the Faculty of Veterinary Science by Prof Alan Guthrie when he returned from the United States of America in 1990. The program was chosen for this project as it is easy to use, effective as a literature database and has the capability of generating a bibliography from the text of a manuscript.

OBJECTIVE

The objective was to establilsh a comprehensive database of literature dealing with infectious and parasitic diseases of both captive and free-ranging African wild animals. It is important also that the format of the database would make it easily available in printed or electronic form not only in this country but elsewhere and more importantly in Africa.

PERSPECTIVE

When micro-organisms were first identified as the cause of disease during the 18th century, Robert Koch laid down basic rules, the Koch's postulates, which if fulfilled would establish that a particular microorganism was the cause of disease. Put broadly they stated that the micro-organism should be isolated from an animal with the disease; it should be grown and multiplied in the laboratory; and that the micro-organism from the laboratory should cause the disease when used to infect a healthy animal. Koch's postulates were important in identifying the microorganism as the cause of disease but did not take into account the broad spectrum of factors that play a role in the development of disease. These include the animal's own genetic make-up, its immune response to an infection by a pathogen; the degree of stress in an animal; the level of nutrition; competition with other species; predation; and many others. The study of disease becomes a study of all of the factors that may influence the health of an animal and not a study of the interaction of pathogen and host alone.

A second and equally important aspect is the impact of African diseases on exotic livestock, cattle, sheep, goats, pigs etc. In most cases disease develops in these animals, which have evolved elsewhere, as a result of infection by microorganisms that complete their lifecycle in a natural environment and in wild animals without affecting the health of their host. Micro-organism and African host have evolved to survive in a state of commensalism and the animal does not develop disease. The impact of these diseases of livestock is as a result of man's attempts to prevent disease. For example, wild herbivores were culled in large numbers in an attempt to control Ngana. Buffalo are confined by measures to prevent contact between them and cattle as they have been shown to carry foot and mouth disease.

APPROACH

The approach adopted in setting up the wildlife diseases database has been one in which a broad view of the causes of disease and the disease itself has been taken. As a result documents covering the ecology of African animal species have also been included. Both non-infectious conditions, for example nutritional and toxic, and other diseases have also been included.

The wildlife diseases database grows almost on a daily basis and the references recorded to date number over 6000. It is proposed that the database be produced in printed form to begin with and that it be updated on a regular basis.