Diseases and Infections of Snakes: A Review

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INTRODUCTION

Snakes are scaly, ectothermic, lungbreathing vertebrates of the order Serpentes in the class Reptilia. They are generally separated on the basis of their anatomy, venom production, and adaptation to burrowing, terrestrial, aquatic or arboreal life. Use of snakes for experimental purposes is not uncommon in major research centers, in spite of the fact that laboratory colonies of snakes do not exist— if reproduction in captivity is a criterion. Experimental collections are comprised of animals taken from the wild and maintained in terraria; therefore, knowledge of the diseases they contract and the microbial agents they carry is essential to their management in captivity.

Terrestrial snakes are best suited for laboratory use because of their small to medium size, mild disposition and simple dietary requirements. The nonvenomous types most commonly used are garter snakes (genus Thamnophis), water snakes (Natrix), and kingsnakes (Lampropeltis). They can be used for investigations where it is desirable to have metabolically retarded, quiescent experimental animals under test for long periods. Ectothermic adaptability provides an additional variable which may be useful.

Reviews of the microbial infections of snakes are rare. In 1936 Glidden summarized certain diseases of snakes known at that time; Klauber (1956) listed numerous diseases and infections of rattlesnakes; and diseases of reptiles have been briefly reviewed by Schlumberger (1958) and by Reichenbach-Klinke and Elkan in 1962 (published in 1965) as parts of general treatises on diseases of cold-blooded vertebrates. Otherwise, the details of investigations of diseases of snakes are scattered among many scientific publications. The purpose here is to bring together current detailed information on diseases of snakes including data not previously reviewed.

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2The generic, species and common names of snakes used throughout this paper are those recommended by Conant et al. (1956).