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Nonhuman primates as pests

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8.1 INTRODUCTION

Wildlife that have become agricultural pests present a widespread problem throughout the world. Traditional control strategies have been, and to a large extent still are, focused on attempts to eradicate the pest species. This has often been very effective in industrial countries, due to technologically sophisticated methods that can result in the actual extermination of a given species within a particular area. Such control is usually more difficult and often unsuccessful in developing countries for a variety of reasons, that include the greater number of potential pest species and the lack of appropriate technology.

There is increasing concern regarding the mass destruction of pest vertebrate species, many of which are in need of conservation. This has led to research into alternative control strategies. This is not a new concept; it is at least as old as the use of scarecrows in Western countries, and the bands of shouting children in many African societies. What has become apparent from such endeavours is that a detailed knowledge of the ecology and behaviour of the target species is of paramount importance to the successful control of animal pests.

Nonhuman primates are often serious pest species in tropical countries. This can be attributed to the intelligence, adaptability and opportunistic tendencies of many primates (Strum, 1986a). These traits also render passive methods of control, such as exclusion from agricultural land by physical barriers, ineffectual. The only techniques that have proved even marginally successful are chasing, shooting, trapping and poisoning the animals, but such measures are wasteful and of limited value; primates are fast learners.

Many serious ecological changes, in countries where primates are
indigenous, have been brought about by an increase in the human population and the expansion of agricultural land. In Africa, much of this land was once occupied by wildlife, and those species that have been unable to adapt to the changing environment are being forced into increasingly marginal habitats. Many species are now threatened with extinction outside small, isolated, protected areas. Not all primate species have the ability to adapt to these environmental changes and those that are able to make the adjustment to a different habitat often become pests. Such primates do not restrict their destructiveness to agricultural crops; other activities include raiding homes, gardens and the occasional family chicken-coop in suburban areas (King and Lee, 1987), the killing of small or young livestock, and the raiding of guest rooms and dining halls in tourist lodges (Brennan et al., 1985; Else and Eley, 1985).

The most successful pest species among Old World primates are from the genera *Macaca*, *Papio* and *Cercopithecus*. In these genera there are three notorious pests: the rhesus monkey (*Macaca mulatta*), the yellow baboon (*Papio cynocephalus*) and the vervet monkey (*Cercopithecus aethiops*). These primates have several features in common, which include a complex social organization; they are highly omnivorous and, while primarily terrestrial, are able to utilize arboreal habitats. The importance of the latter two characteristics for a primate to become a successful pest was pointed out by Kavanagh (1980), who compared the much greater success of vervets to that of the arboreal mona monkey (*Cercopithecus mona*) in adapting to agricultural development in a forest habitat in Cameroon.

The process by which primates become pests also depends upon their behavioural responsiveness in their ability to adapt to a changing ecological environment. This adaptive behaviour provides an excellent opportunity to study and monitor changes in primate behaviour in relation to changes in their physical environment. An understanding of this process provides practical insights into such diverse topics as the ontogenetic plasticity and cognitive capacities of a given species, the dynamics of behavioural change of early humans and, on the management side, new techniques to aid the control of primate pest problems.

### 8.2 A STUDY OF PRIMATE PEST PROBLEMS

This study is drawn from two projects which included surveys of human attitudes towards, and understanding of, primate pest problems and some measures that are taken to combat such problems. The surveys were conducted by means of questionnaires sent to,