

Why is research being done on wild animals and of what importance is it to man or the economy? These are but a few questions asked by the layman who frequently and sometimes unknowingly utilizes and benefits from the results obtained.

There are several diverse reasons for studying wild animals; however, the goal, that man can benefit, remains the same. All organisms, microscopic or macroscopic - man, monkey, mushroom or micro-organism - are composed of the same elemental materials, grow in the same way, live and die by the same biochemical mechanisms and react to their environment in ways that are similar.

Some of the reasons for studying wild animals are:

**Economic:** In agriculture certain animals account for large crop losses. It is estimated that rats alone destroy approximately a fifth of all food crops in the world. In India their depredation has deprived the inhabitants of enough grain to fill a freight train stretching more than 4 000 km.

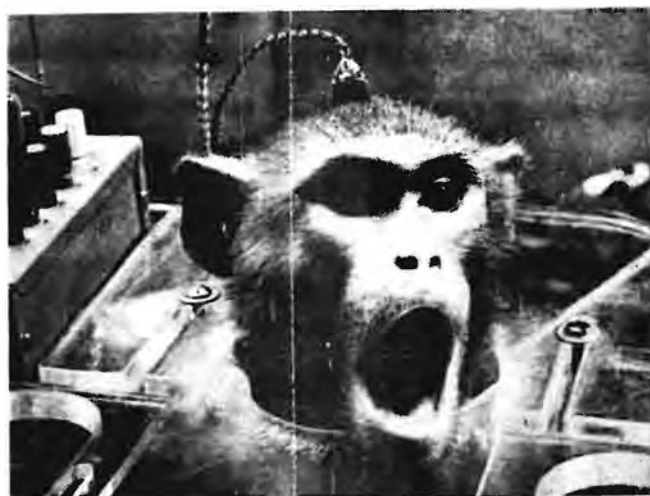


*The rat, a pest in more than one sense.*

On the positive side, wild animals can, as a source of protein, bring in large revenues. In 1967 it was estimated that 2,5 % of the national income of Botswana was provided for by wild animals and that 60 % of all protein consumed was derived from wild animals.



*Callie Lynch, Museum Mammalogist, author of this article.*



*Rhesus ape in a medical research laboratory.*

## BIOLOGICAL RESEARCH —

### A WASTE OF TIME AND MONEY?

**Medical:** In the medical field wild animals play a very important role. History's most calamitous plague, the Black Death (a disease transmitted by fleas harbored by rats), killed an estimated 25 million people.

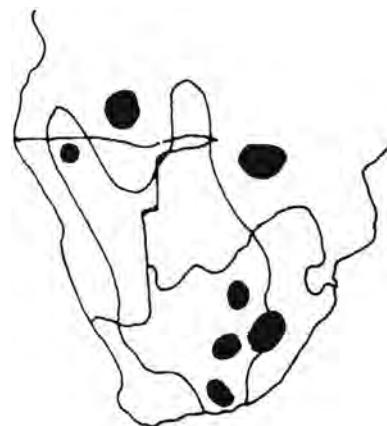
Yet in laboratories wild animals have contributed vastly to the cure of human illness. Few people have not benefited in some way - even been kept alive - by studies made on wild animals.

In South Africa at least 14 species of wild rodents are used in medical research on bacterial, rickettsial, viral, fungal and parasitic infections and in diabetes and cancer research.

Non-human primates are also extensively used in medical research. Were it not for these animals, heart and kidney transplants, to mention only a few, would not have been possible.



*Yellow mongoose (an albino specimen found in the O.F.S.)*



*Southern Africa, with potential Plague areas in black. Note that a large part of the Orange Free State is also a potential plague area.*

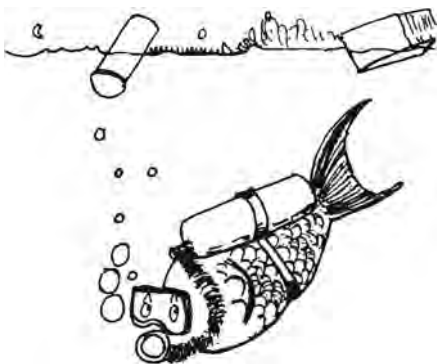
In the veterinary field one need only refer to the yellow mongoose, one of several carriers of the fatal viral disease, rabies, to illustrate a reason for studying wild animals.

In the psychological field, studies made on wild animals have greatly contributed to solving social problems such as stress (a major cause of heart failure), aggression and many more. In the United States alone, some 20 million rats and wild animals are used annually in medical and psychological studies.

**Recreation and Education:** It is essential in today's world to have some form of education and recreation, and in these fields too wild animals play an important role. Here one need think only of zoos and game reserves. During the period 1965 - 1967, 380 000 people visited the Kruger National Park. In 1967 the National Parks Board alone (which excludes provincial, municipal and private game reserves) had a turnover of R9,5 million.

**Aesthetic and cultural reasons:** South Africa has a rich wildlife heritage which must be conserved and preserved for future generations.

**Ecological reasons:** One aspect of ecology is pollution and its control. Pollution can be caused either by the indiscriminate release of chemicals into the soil, air, or water, or by the dumping of refuse, of the disposal of radio-active material. Pollution can result in the extinction of species, but more often it causes a general deterioration of the quality of life as such.



**Science for science:** A last reason for doing research on wild animals, and by no means the least, is for purely *scientific purposes* i.e. for the sake of Science. This may be regarded by many as irrelevant and a waste of time and money. However, the contrary is true. What seems unimportant for insignificant today may be of vital importance tomorrow.

To give but one example: A hundred years ago the world-famous microbiologist, Louis Pasteur, discovered the process by means of which micro-organisms can be eliminated. Even today we pasteurize our milk. But the discovery



*Giraffes in the Kruger National Park.*

*Imagine this scene without any plant or animal life! - That is the end result of pollution.*

of the process was an incidental result, not the object, of Pasteur's research.

For whatever reason animals are studied, it is necessary to first obtain the following basic information about the animal.

- \* Identify the animal with which we are dealing, i.e. its name and relationship to other animals. These fields of study are termed Taxonomy and Systematics.
- \* Where does the animal occur and how does it react to its surround-

ings, i.e. its distribution and the interaction between the animal and its environment. These studies are called Zoogeography and Ecology.

- \* How does the animal live, i.e. how does it behave. This study is referred to as Ethology.

These are then some of the fields of study undertaken at institutions such as museums in order to disseminate information to the multitude of bodies concerned in the economic, social, and cultural fields.

## *Sandsteen Letters*



Danksy die hartlike samewerking van die firma E.E. Bolt en Seuns (Edms) Bpk is onlangs daarin geslaag om betonletters met 'n sandsteenvoorkoms te giet en die naam van die Museum duidelik in beide landstale op die westelike fasade (die hoofingang) van die gebou aan te bring.