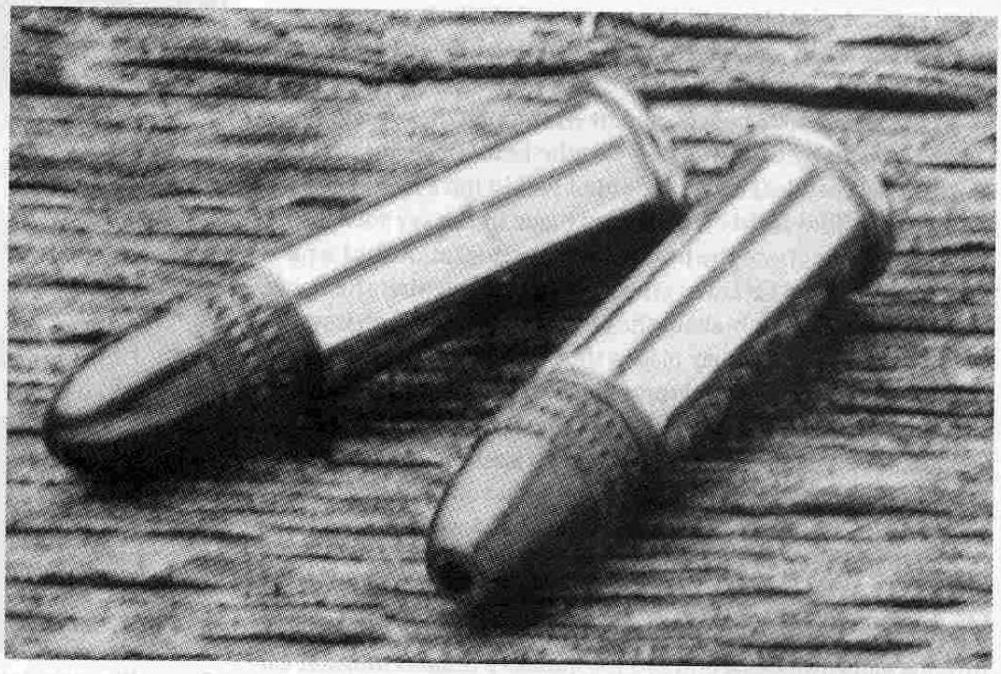
Kill an Elephant with a .22LR?

By David Westerhout



I recently received a letter which asked if "... killing an elephant with a .22 can be done with any amount of certainty?" The writer quoted the 8th edition of *Cartridges of the World* as referring to somebody in South Africa killing an elephant with a .22, and said that a Barberton man had recently killed a buffalo with a .22.

My first reaction was that this ridiculous question should not even be asked. I have hunted elephant often and have used a .22LR a great deal on mammals and birds, but it would never have occurred to me to even think of killing an elephant with a .22LR. I discussed this issue with several people who have hunted elephant and who are familiar with the limitations of the .22LR – all were unanimous in stating that it would be impossible.

Although hunting stories have a habit of 'growing' with repetition, there is seldom smoke without fire, and I was interested enough to explore the matter – especially as it raises interesting aspects of anatomy, ethics and practicality.

Killing a buffalo with a .22LR is certainly possible, but difficult in the manner described, namely at some distance and from the same level as the animal. Many farmers kill cattle with a brain shot from a .22LR, but this is usually with the muzzle above the head, shooting down at an angle into the forehead or back of the skull. Several farmers tell me that this can be very difficult with a very large bull or ox which would more closely resemble a buffalo. *Magnum* has published numerous articles and letters condemning the use of the .22LR for anything other than very small animals and birds and one would seriously question the ethics and sanity of anyone hunting buffalo or elephant with a .22LR. Even with a high velocity .22LR with a solid bullet, the penetration is poor, especially as the bullet easily deforms or breaks up, even on small bones. Indeed higher velocity ammunition may increase the risk of bullet failure.

A friend of mine fired six rounds from a .38 special revolver (6-inch barrel) into the head of a wounded buffalo in an attempt at a brain-shot. None was successful and the base of some of the bullets could be seen, not having fully penetrated the skin. It is hard to imagine the .22LR doing better.

It is very important to ensure that we are only discussing the .22LR. Can we be sure that the reports of 'killing with a .22' did not relate to centre-fire .22s with a solid bullet? It is certainly possible to kill an elephant with such a weapon, but this is certainly not recommended, nor ethical.

I discussed the issue of the .22LR on elephant with two veterinary surgeons who hunt elephant, a very experienced PH and two wildlife experts who participated in big elephant culls with the Rhodesian and Zimbabwe National Parks. All were unanimous in their belief that a lung shot on elephant is impossible. The tiny, light bullet would almost certainly not be able to penetrate the thick skin, fat and ribs. Even if it slipped between the ribs it is unlikely to produce significant damage to the lungs, and since the .22 size hole in the skin would tend to close almost instantly (even .375 calibre holes often cannot be easily detected in an elephant skin) the damaging 'sucking' of air through the .22 hole would probably not occur.

We are left now to consider the brain and heart shots with a .22LR. Without a suitable elephant head to experiment on one can only fall back on experience, knowledge of anatomy and photographs. An elephant's head is very hard to penetrate. In addition to the bone there are numerous large muscles and tendons some of which are required to move the massive trunk. As is well known, the majority of the skull is a 'honeycomb' structure inside a very hard outer layer of solid bone. An article in *African Hunter* (Vol 5, No 2) states: "Unless fired from a quartering shot into the back of the brain, any bullet has to pass through 18 inches to 2½ feet of muscle and bone before it reaches the brain." It is certain that a .22LR could not achieve this penetration. It is also doubtful that the going-away quartering shot could be achieved with a .22LR.

It appears to me that the only way a .22LR bullet could reach the brain would be to avoid having to penetrate bone, tendon and muscle by travelling through an already existing canal to the brain. Such canals would be that housing the optic nerve (from eye to brain) or the auditory canal from the earhole to the brain.

During an elephant cull in Zimbabwe, the culling team ran out of ammunition, but were left with one immobilized animal to kill. It was decided to attempt to kill it by reaching the brain through the earhole. A steel ramrod was used, but initially it could not be inserted into the auditory canal due to obstruction by the outer ear. In humans, to view the eardrum down the auditory canal, the outer ear (pinna) has to be pulled upwards, backwards and outwards.

The culling team was forced to cut the protective flap and other tissue to expose the canal. The rod was inserted, but could only be pushed in a short distance. They then hammered the rod in with a heavy piece of wood and even then made slow progress.