

FORUM

Intelligence with horns

Anna Merz seeks help to save an animal now on the brink of extinction

OF ALL the great mammals, the rhino probably has the worst problem with its public image, and misconception has much to do with this. If the rhino—all five species—is to continue to live on this planet and into the next century, many more people have to start caring about it. Perhaps this would happen if it were generally realised how undeserved is the label that is hung on it as being stupid, solitary and bad-tempered.

I am frequently asked, living as I do in a rhino sanctuary in Kenya, if rhinos are intelligent and, if so, how does one recognise intelligence in a creature so different from ourselves. The intelligence of a chimp is easy to recognise as it is so similar to us. That of an elephant is also easily realised as they use their trunks to manipulate their environment in a similar way to that in which we use our hands. But rhinos have neither trunk nor hands, their eyesight is very bad; they live in a world different from ours: theirs is dominated by smell and hearing rather than sight. But it does not mean that because they are different they are stupid. Nor does it mean that because they do not live in herds they are antisocial.

On the contrary, in the eleven years that I have lived with them I have seen that they have a most interesting social behaviour and incredibly varied and complex methods of communication. Like many other mammals, rhinos use body language, their droppings and urine, and a wide variety of vocalisations. But to me, the most interesting and unexpected of all was to find they use a highly complicated method of regulating their breathing, a sort of Morse code, to communicate.

Animals whose lives are controlled mainly by instinct and not learned behaviour do not spend a great deal of time with their mothers. But a black rhino calf will spend four years with its mother and much longer if, for some reason, she fails to calve again or loses her calf. I am convinced that this lengthy period of mother-calf bonding is necessary not because the calf needs the time to find out what to eat and where to drink, but because it has to learn how to behave with the other members of the group, not herd, to which it belongs.

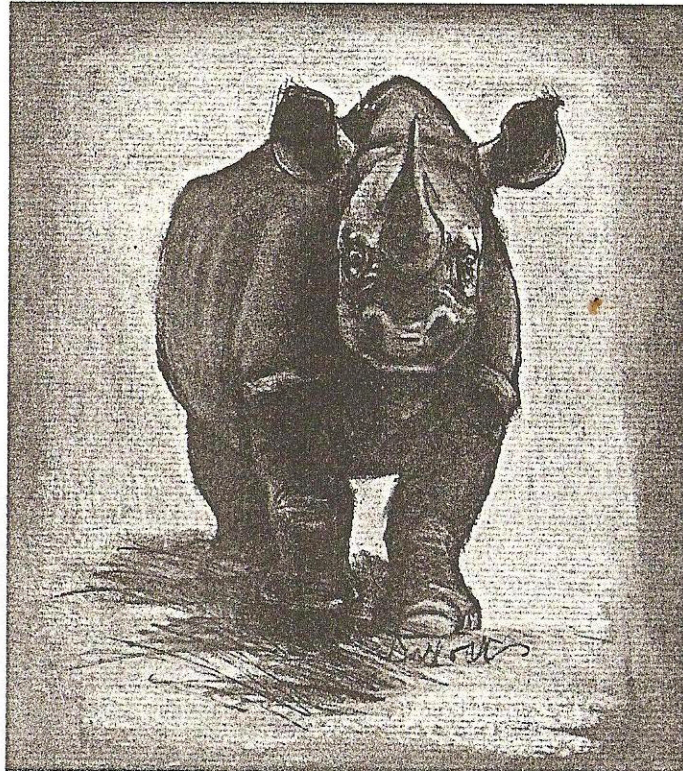


Illustration: Andy Da Valls

Most wild rhinos are so obsessed with their terror of humans that it is difficult to observe them at close hand. However, I have been lucky enough to raise a female black rhino calf, Samia, who was deserted by her mother at birth. I have observed her closely for eight and a half years. I have also been fortunate that a bull white rhino, Makora, who was never attacked by hunters and so never learnt to fear humans, seems to regard me as his friend.

Of the domestic animals with whom humans have regular dealings, the rhino is most closely related to the horse. Like the horse it is nervous and highly strung, but unlike the horse, it is better able to control its fear in moments of potential disaster. On two occasions, had Samia or Makora panicked, disaster would have ensued but on both occasions the animal had the intelligence not to.

I was out walking with Samia one evening, before she was weaned, when she slipped and trapped her front leg between two branches of a fallen tree. We were some way from home and I had no means of releasing her leg and was powerless to help. Her fear was evident from her rolling eyes, her cries of pain and from the way in which she trembled. But slowly and with her weight on three legs, she managed to

free herself. Had she given in to fear she would have broken the leg and had little chance of surviving.

The second occasion concerned Makora. I was out with one of the trackers and from the car we watched a black rhino cow and her calf. We noticed that Makora was moving towards us and, as he approached, he looked increasingly odd until we could see that he was totally entangled in wire. Where I grew up in Cornwall, gates and gaps in walls and hedges were invariably patched with wire and so cross-country exercises on horseback were somewhat hazardous. I never saw a horse that did not panic if its legs or tail became entangled. Yet here was a rhino, in a worse mess than any horse I had ever seen, who had either recognised the sound of my car's engine, or got scent of me, and had come for help.

We had no wire clippers with us, so what could we do? When I got out of the car, Makora, despite trembling all over, gave me the greeting breathing. I managed to get my hanky between his eye and the wire that was cutting into it, then I took off my shirt and worked it under the wire that was cutting into his penis. My tracker used his cutlass and a flat stone to cut the wire. As he cut the wire so I disentangled it from the animal's head and horn and under his belly. I kept talking to him for more than forty minutes. All the time Makora stood still except for tremors that shook his body. When the last bit of wire fell away and he felt himself free, he moved slowly off into the bush.

I was convinced that I had witnessed an animal of outstanding intelligence. Wire is something terrifying that no animal can comprehend. Makora had known to come for help. Still more incredible was the control he exercised over himself while we extricated him, although the process must have been painful for him. And although he knew my voice well, I had never attempted to touch him before.

The three and a half years that I devoted to raising Samia were full of surprises that revealed her mental capacities. I have raised chimps and a range of wild animals but nothing had prepared me for Samia's

abilities, not for the manipulative skill of her upper lip, not to mention her determination to be with me.

Despite her ever-increasing strength she would not use brute force. She learnt how to undo most handles and bolts, and few doors or gates presented an obstacle to her for long. She even learnt, in less than a day, how to unhook an electric wire placed round the garden to prevent her entering the house. If I hid from her she would return to the garden, open the gate for the dogs and then follow them to wherever I was hiding. By no stretch of the

imagination can this be described as instinctive behaviour.

Samia has recently been mated by a male captured in the early part of the year. His fear and loathing of people was unmistakable, but despite this he has followed Samia when she comes to visit me, thus giving me, despite the complications of his presence outside my garden gate, a wonderful opportunity to observe closely two adult rhinos communicating to each other nose to nose. Were I not within eight feet of them I would never have realised the complicated and intricate pattern of their

breathing which left me in no doubt whatsoever that they were communicating to each other for nearly 20 minutes before they moved out of my hearing.

I write all this in the hope that if enough people realise how fascinating and intelligent these magnificent creatures are, it will be possible, even at this late stage, to bring them back from the brink of extinction to which they have been brought by a combination of human greed and indifference. □

Anna Merz is the founder, sponsor and patron of the Ngare Sergoi Rhino Sanctuary, Kenya.

All part of life's rich tapestry

Peter Hughes fears that too many students are being dragooned from the sciences to the arts

THE season for comments on the declining A-level entries in mathematics and science has come and gone. Among the many suggestions that educationalists and so-called friends of education have made this year, one made me more gloomy than usual. Simon Jenkins argued that Britain does not need more scientists than at present, so it does not matter if young people choose other subjects to study (*The Times*, 1 September).

This suggestion assumes that the prime purpose for the study of science is to satisfy the demands of society, a misconception widely supported by politicians, irrespective of party. I utterly reject it in the same way that I would reject suggestions, if they were made, that the prime reason why we study English is to produce journalists, or that we train geographers to satisfy the demands of the travel industry.

I first met this attitude to science education when I started teaching at Shrewsbury 20 years ago. There was then a hierarchy of subjects with classics at the top and science at the bottom. "It is so difficult to find a scientist who is also a gentleman" was a phrase then in current use, attributed to a senior housemaster. The science staff, collectively known as "plumbers", were there because many parents wanted their sons to be doctors or engineers; they were there to provide a service rather than an education.

It was immaterial that many of my science colleagues were humane, well-read and good company. It was ignored that it was possible for a scientist, Sir Cyril Hinshelwood, to be president of the Royal Society and president of the Classical Association at the same time. The in-built attitude was that scientists were a different breed of person, with different educational objectives.

Unfortunately, the attitude remains with us today. It must be resisted. The first and foremost reason for studying science is because of the power and beauty of the subject. In this it is no different to any other discipline: we teach our subject because we want young people to share in our

enthusiasm for it. If society gains as a result, this should be regarded as a bonus, and not as the prime purpose.

We must, therefore, try to make science a more attractive proposition for pupils to study beyond the age of 16. This does not mean that we should radically change existing A-level syllabuses in biology, chemistry and physics, which are fine for prospective science specialists. What we need are alternative syllabuses, suitable for the nonspecialist and specialist alike. This was one of the reasons why we at Westminster School, London, initiated the Understanding Science Project five years ago. This project provides material which can be used in a variety of ways; for general study work, to complement existing science courses and as an Advanced Supplementary (AS) subject in its own right. At the heart of the course is a series of controversial topics which we treat in some depth and provide up-to-date source material for discussion work. The same boys and girls who have rejected traditional science courses at 16, are quite willing to discuss these controversial topics both in and out of the classroom.

All too often the discussion is carried out in a vacuum, with little or no supporting evidence, and the contributions are little more than individual opinion. Unfortunately, some journalists use this technique. They seem quite willing to sacrifice balance for sensational copy. Cold fusion and the myth of AIDS in Africa are two examples of topics which these journalists have treated in such a cavalier way. It is, of course, quite right to question what is claimed to be "the established wisdom" but any such questioning must be supported by reliable supporting evidence. The difficulty in

trying to include more subjects in the sixth-form curriculum is that we are restricted by the increasing competition for university places.

Good A-level grades become more important each year and preliminary evidence suggests that the competition for 1994 will be even more severe. This concern over grades is one of the reasons why half-subject AS levels have been such a dismal failure. We need to encourage students to take a mix of A and AS levels so that they can satisfy the requirements for their chosen university, while retaining a broader base of subjects. The principal offenders in

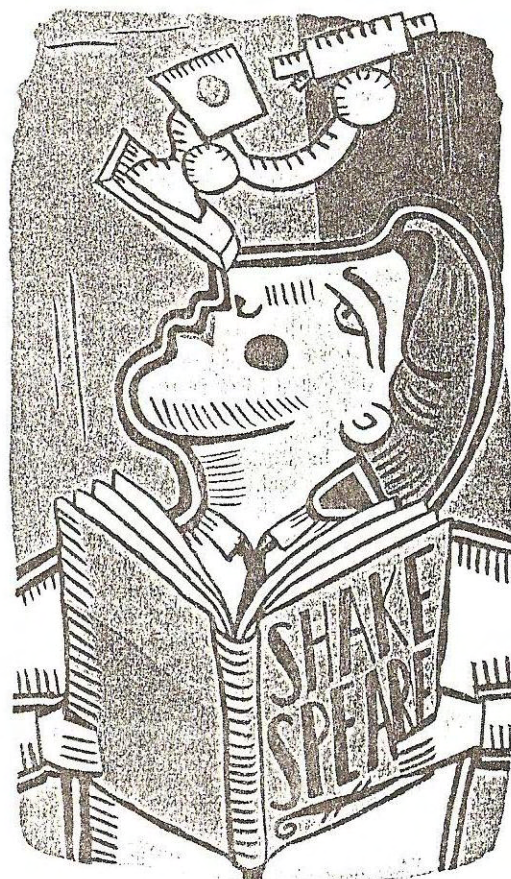


Illustration: Shane McGowan