

LETTER

Natural behaviour is simply a question of survival

Sir,

I fully support Veasey *et al*'s (*Animal Welfare* 5: 13-24) contention that a full repertoire of wild behaviour does not guarantee an optimal state of welfare for an animal, and would like to add further arguments to support their view.

Wild animals have evolved behaviour which enables them to reach reproductive age in the wild with a probability ranging from around one in a million (in some fish) to one in 10 (for a macaque), depending on reproductive output, parental care and exposure to environmental hazards. As Veasey *et al* point out, animals suffer severe and often fatal problems in nature and their natural behaviour reflects their efforts to survive. To consider that wild behaviour is always indicative of well-being is therefore unrealistic; it most often represents a life and death struggle for survival.

Observations on captive individuals have shown that the mammals actively seek opportunities to gain information and learn about their environment; presumably, they have evolved a certain general expectation of information relating to the complexity of their natural habitats and lifestyle. Markowitz and others have clearly shown that mammals are eager to undertake activities in captivity which may be highly artificial but challenge the animal's intelligence and ingenuity.

The exact nature of much of the information which mammals seek is not rigidly specified in the mammalian genome. For example, when I visited Inuyama, a chimpanzee's desire to play computer games was clearly illustrated when the scientist who worked with her, Dr Matsuzawa, approached her large enclosure. The animal immediately left her companions and rushed to the door of the

laboratory, seemingly hoping for an opportunity to use the computer. Zoos may like to give their visitors the impression that animals are living as in the wild and I would not deny that they should be provided with as many natural features as possible, but polar bears cannot be allowed to hunt seals, nor can armadillos be provided with termite mounds. For many species any natural features must be supplemented with artifacts. A piecemeal approach, such as asking whether a particular behaviour pattern is important to a mammal may not always be realistic, firstly because they are so adaptable and secondly they may not know what is good for them. For example, mice will cross an electric grid in order to fight and rats will inject themselves with cocaine to the point of addiction. Asking such questions as do all carnivores need to hunt? would mean that we should have to do research for ever (no doubt an attractive option for applied ethologists!) because even closely related species have different priorities. Hyderabad zoo, in India, has several safari parks, one contains well-fed lions and spotted deer living amicably together, but the zoo would not put deer in another which accommodates well-fed tigers, because they still like to hunt.

Veasey *et al* are right. It is time that we ceased to assume that wild animals lead an Arcadian existence and that the average captive-reared mammal, accustomed to a protected but complex 'artificial' existence, would welcome a return to the wild. Let us continue the practical and imaginative approaches of Markowitz and Shepherdson and many others, which operate on the practical approach of keeping animals busy by providing interesting things to do both 'natural' and artificial.

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