

Animals in British Schools: Legal and Practical Problems

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Abstract

Well-managed, healthy animals can be useful and beneficial aids to the emotional and intellectual development of young people at the primary and secondary levels of education. In Britain, vertebrate animals are not used in schools for experiments which might cause pain, distress or disease. The laws protecting animals are comprehensive but at present it is the Health and Safety at Work Act (1974) which is having the most impact on the keeping of animals in British schools. The practical skills most needed by teachers are in the handling, sexing and humane killing of animals. Training of teachers should include instruction in these, as well as in the care and management of laboratory species.

Introduction

The policy of the Universities Federation for Animal Welfare (UFAW) toward keeping animals in schools is that if it can be done well, so that pupils learn sound management principles and caring attitudes, then animals are a beneficial aid to their emotional and intellectual development. If it cannot be done well, it should not be done at all. We are in agreement with the Schools Council policy as laid down in their Recommended Practices for Schools relating to the use of living organisms and material of living origin (Wray, 1974).

In the early 1970's a working party was set up by the Royal Society and the Institute of Biology to discuss whether dissection of dead animals was really necessary in schools. Their answer was a qualified 'Yes' for pupils of 16 years and upwards (Report, 1975). If a similar group were set up to discuss whether experiments on live vertebrates involving pain, distress or disease were necessary to achieve British educational objectives, the answer would almost certainly be an unqualified 'No'.

Legislation

The legal situation in the United Kingdom is that experiments on vertebrates likely to cause pain, distress or disease are forbidden, unless the premises are registered by the Home Office and the experimenter holds a license under the Cruelty to Animals Act of 1876. No schools are on the list of registered premises and this means that no experiments involving surgery or requiring anaesthesia are being carried out there on ver-

tebrates. Nonmammalian vertebrates are less closely protected than mammals. For example, an unlicensed person may pith a frog: the frog is then legally dead and can be used for experiments. Chick embryos may be used up to the time that they are viable (about 19 days). Nonsurgical experiments are permitted so long as they are not liable to cause pain, distress or disease. For example, behavioural experiments involving open fields, mazes or Skinner boxes are permissible so long as the animal is not starved beforehand and no aversive stimuli are used. Killing an animal does not constitute an experiment unless the method is untired.

The Protection of Animals Act (1911, England and Wales; 1912, Scotland) is the most comprehensive law protecting animals in Britain. It is an offence under this Act to cause pain or distress to a domestic or captive animal. Offences include omitting to provide food and water; performing operations such as cutting claws without due care; and poisoning, which would include the injection of toxic substances. One purpose of the 1876 Act is to permit bona fide scientists to perform procedures which would be offences under the 1911 Act. An unlicensed scientist such as a biology teacher could be liable to prosecution under both Acts. For instance a teacher feeding a rat on a diet deficient in Vitamin B so that the animal grew up with a deficiency disease would be infringing the 1876 Act if he fed the diet intentionally but he would be infringing the 1911 Act if he did it by mistake.

The Dangerous Wild Animals Act, 1977 makes it illegal to keep captive any dangerous animal such as a wolf, baboon, crocodile or lion without a licence from Department of Environmental Health. This is primarily to protect the public, but the Officer will ensure that the method of caging is humane before issuing the license. This Act should not have practical significance to keeping animals in schools since dangerous species cannot be recommended as educational aids.

The Protection of Birds Act, 1954 makes it illegal to trap or keep in cages any British birds except those classified as pests, such as pigeons or crows, or game birds. Consequently, the birds kept in British schools are those bred in captivity such as canaries and budgerigars.

The Health and Safety at Work Act, 1974 is the law having the most impact on keeping animals in schools at present; it is not concerned with the protection of animals but with the protection of employees. Animals can be dangerous (Wray, 1975). They bite and scratch; they transmit diseases; they escape and chew the electric wiring. Before 1974 an injured teacher or pupil could bring a civil action against the school and claim compensation. Now, if there is an accident and the Health and Safety Inspectors consider that it was caused by the negligence of the employer, then the Educational Authority is liable to criminal action and a heavy fine. This has made many head teachers nervous and inclined to use the present financial cut-backs as an excuse for reducing the number of animals kept in the school. In the long run this Act will benefit animals by forcing schools to consider more carefully what allocations of space, money and staff are required to maintain a well-run and therefore safe animal unit.

Safety Considerations

Animal supply is an example of the necessity for planning. Some Education Authorities hold animal banks for supplying the schools in the area, but if they do not and if the teacher's budget is too low, the temptation to go to the pet shop around the corner for his animals may be overwhelming. To ensure safety, animals should be ordered from accredited breeders who can guarantee that their animals are free from zoonotic diseases such as tuberculosis, pasteurellosis, scabies, ringworm, salmonellosis, leptospirosis and lymphocytic choriomeningitis. This last mentioned disease, LCM, is commoner than realised. A recent survey in Britain showed that 5% school children carry antibodies to LCM. The symptoms are similar to those of influenza: fever, headache and muscle pains. The danger of the disease is that it sometimes passes on to a second phase involving meningitis, and if contracted during pregnancy it can cause eye defects in the fetus. The virus is thought to have its reservoir in wild rodents and to be transmitted from them to pet rodents such as pet mice and hamsters. The route of infection to man is thought to be the contamination of broken skin by infected saliva and urine and probably also by the inhalation of infective particles (Skinner and Knight, 1979).

The presence of zoonotic disease in wild rodents makes it important to rodent-proof any room where animals are kept in schools. Holes in floors and walls must be blocked, drains specially designed and heating and ventilation ducts proofed. Animal rooms and food store rooms act like magnets to wild rodents; the problem of keeping them out will often be greater than the problem of keeping the inmates in.

Practical Considerations

The safety considerations are important but to the teacher they may appear secondary to the practical problems of handling and sexing animals, particularly mammals, and their routine management. Handling and sexing are not easily taught from a text-book. A modicum of skill is required which can only be acquired by practicing on live animals. Some sort of instruction should be provided to teachers at either the student-teacher or in-service level.

Information on how to feed and care for animals can be obtained largely from books, for instance those produced by UFAW (undated, 1976, 1978) and the Schools Council (Wray, 1974; Wray and Gaitens, 1974). A course of instruction could be used to emphasize those points which are not immediately obvious. Examples are the necessity to buy sterilized bedding materials because of the risk of wild rodent contamination in sawmills; the need to supplement the diets of guinea-pigs if they are being fed standard rodent pelleted diets because of their special requirement for vitamin C; the concept that the regular removal of soiled litter is not so much a chore as an exercise in preventive medicine because the ammonia released from the breakdown of urine in litter is actually harmful to the respiratory mucosa of the animals. The role of the human hand in the transmission of disease becomes clear once it is demonstrated how bacteria in the undressed cut on the hand of a student may be transmitted to broken skin on the animal during handling; how pathogens may be transmitted from one to the next during handling; and how pathogens such as *Salmonellae* from a mouse or a tortoise will eventually pass from the hand to the mouth of the student.

Disease-free animals can also be a health hazard to humans. Some teachers claim that at least one pupil in every class will develop an allergy to animal hair, urine pro-

tein dispersed in dust, or to locust dust. The allergy may be seen as a reddening of the skin after contact or as running eyes and nose after inhalation of dust. The best treatment is to avoid contact, but if this is impossible, as in the case of the teachers themselves, then the symptoms can be controlled medically.

Euthanasia

Euthanasia is a subject repugnant to many people, and even some teachers, when faced with the problem of disposing of their old, sick or vicious animals, may try to pass them on another school. This is obviously unsatisfactory at the secondary school level. For euthanasia of small animals, UFAW (1978) recommends carbon dioxide. Special apparatus can be constructed to use either solid or gaseous CO₂ or the animal can be dropped into a plastic bag inflated from a CO₂ cylinder. These methods are suitable for mice, rats, guinea-pigs and hamsters. It is particularly useful for vicious animals which cannot be removed from their cage: the cage can be placed in a plastic bag at least 5 times the volume of the cage and CO₂ run in from a cylinder. Chloroform is still widely used for killing animals. It is humane but rather toxic to the operator and highly toxic to other rodents. In some strains of mice, exposure to low concentrations of chloroform will render the males infertile. Rabbits react badly to chloroform; they are too large for pure CO₂ to be considered humane; mixtures of CO₂ and oxygen which are humane require sophisticated equipment to ensure the right proportions; the kindest methods to kill rabbits are either for an experienced operator to break its neck or for a veterinary surgeon to give an injection of barbiturates. These methods are described in *Humane Killing of Animals* (UFAW, 1978).

Summary

The new syllabuses introduced into British schools in the 1970s have stressed the importance of living animals in the classroom. This has led to a need for information, guidance and advice on how to keep animals in schools, particularly where this was not included in the curriculum of student teachers. At UFAW, we have tried to contribute to this supply of information with the hope of improving the welfare of the animals in schools and of increasing the satisfaction and pleasure of the people responsible for their care.

References

- Report (1975) The dissection of animals in schools. *J. Biol. Educ.* 9: 146-154.
- Skinner, H.H. and Knight, E.H. (1979). The potential role of Syrian hamsters and other small animals as reservoirs of lymphocytic choriomeningitis virus. *J. Sm. Anim. Pract.* 20: 145-161.
- Wray, J.D. (1974). *Recommended Practice for Schools relating to the Use of Living Organisms and Material of Living Origin*. Schools Council, English Universities Press, U.K.
- Wray, J.D. (1975). Safety and the hazards of using living organisms or material of living origin. *J. Biol. Educ.* 9: 140-145.
- Wray, J.D. and Gaitens, J.F. (1974). *Small Mammals*. Schools Council Publications, Hodder & Stoughton Educational, Sevenoaks, Kent, U.K.
- UFAW (undated) Information Leaflets on Species of Animals kept in Schools, Universi-

ties Federation for Animal Welfare, 8 Hamilton Close, Potters Bar, Herts., U.K.
UFAW (1976) *The UFAW Handbook on the Care and Management of Laboratory Animals*, 5th ed., Churchill, Livingstone, Edinburgh and Longmans, New York, N.Y.
UFAW (1978). *Humane Killing of Animals*. 3rd ed., Universities Federation for Animal Welfare, 8 Hamilton Close, Potters Bar, Herts., U.K.

No Pain Infliction by Untrained Youths

Christine Stevens

Abstract

Outlined are the efforts of the Animal Welfare Institute (AWI) for the last twenty-five years to end abuses to animals in high school biology programs. After concluding that the AWI's two brief rules prohibiting painful experimentation were not well understood by students even after years of effort, the AWI adopted the rules of the Canadian science fairs, which are similar to the Westinghouse Talent Search in that they simply prohibit experimentation on vertebrate animals. The presentation includes reference to the AWI manual, "Humane Biology Projects."

Development of Scientific Thinking and Observation

Close observation of animals by scientists of genius have contributed enormously to the changing view of the relationship of our species to the others. We are beginning to wonder whether our capability to do massive harm may be the major distinction between man and what used to be commonly known as "the brutes."

Henri Fabre, Charles Darwin, Karl Von Frisch, Konrad Lorenz, Niko Tinbergen, Jane Goodall, George Schaller, Iain Douglas-Hamilton, Dian Fossey, to name a few inspired field naturalists, have changed our concepts, while the Gardners, Roger Fouts, and Francine Patterson, who have pioneered in communications with the great apes, have shown us what is possible through painstaking research in understanding the thinking of some of our fellow inhabitants of the earth. Rachel Carson (1977) wrote:

I like to define biology as the history of the earth and all its life—past, present, and future. To understand biology is to understand that all life is linked to the earth from which it came; it is to understand the stream of life, flowing out of the dim past into the uncertain future, is in reality a unified force, though composed of an infinite number and variety of separate lives. The essence of life is lived in freedom. Any concept of biology is not only sterile and profitless, it is distorted and untrue if it puts its primary focus on unnatural conditions rather than on those vast forces not of man's making, that shape and channel the nature and direction of life.

To the extent that it is ever necessary to put certain questions to nature by placing unnatural restraints upon living creatures or by subjecting them to unnatural conditions or to changes in their bodily structure, this is a task for the mature scientist. It is essential that the beginning student should first become