

CONSERVATION OF RARE LIVESTOCK BREEDS IN THE UNITED KINGDOM

La conservation des races des animaux domestiques rares
dans le Royaume-Uni

La conservación de las razas raras de animales domésticos
en el Reino Unido

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INTRODUCTION

Serious attempts to establish satisfactory and efficient means of conserving the less common breeds of domesticated livestock in the United Kingdom have been active for the past 15 years. However, only in the past year has an appropriate organisation been set up to raise the necessary supporting finance to develop all the functions required to ensure the long term survival of several almost extinct breeds of cattle, sheep and pigs. Less attention has been paid so far to certain breeds of horses and poultry. The shortage of fossil fuels may help in part to ensure the survival of horse breeds but more deliberate measures may have to be taken to conserve certain breeds of poultry. This story of what has happened in this field in the United Kingdom is particularly interesting, because the increasing need to develop recreational pursuits and amenity land use has been an important element, even though the main reasons for breed conservation are more largely concerned with the longterm need to maintain non-renewable genetic resources and with providing the opportunity to study biological variation and evolution.

THE REASONS FOR CONSERVATION

Detailed discussion of the reasons for expending resources on activities concerned with conservation of domesticated livestock in the United Kingdom have

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been given elsewhere by JEWELL (1971). In summary they can be described under four main headings which are not given here in any order of priority:

1. The need to maintain a biological resource which cannot be replaced, once lost.
2. The need to maintain biological variation in domesticated species to meet the immediate and possible future requirements of the animal breeder and livestock producer.
3. The need to maintain in living form the evolution of domesticated species. Conservation facilitates a more informative study of the biological consequences of domestication and of the variation of biochemical and physiological processes.

THE HISTORY OF THE DEVELOPMENT OF THE RARE BREEDS SURVIVAL TRUST

For about the past fifteen years in the United Kingdom, several biologists, and particularly the Zoological Society of London, tried unsuccessfully on the basis of the reasons given above to persuade various Government and charitable organisations with the essential financial resources, of the need to support conservation of domesticated breeds of livestock in danger of extinction. Little interest and practically no money was forthcoming for this activity. Arguments advanced by the organisations approached for support, as to why they were not interested, included suggestions that conservation was not of agricultural importance, was not economically important or justifiable and that individual breeders should maintain the breeds concerned for their own benefit and for the benefit of future national needs. The fact that an activity of this kind is unlikely to flourish unless there is a group of enthusiasts to stimulate interest and who need some financial resources for essential services such as information collection and communication proved to be an insufficient argument to draw any substantial offers of financial assistance.

In 1964 the Zoological Society of London, one of whose chief aims is the promotion of the study of breeding wild animals in captivity, set aside about 100 acres of farmland at Whipsnade Park, Dunstable, Bedfordshire for the establishment and maintenance under expert guidance of a few small flocks or herds of several British native breeds of domesticated species. The collection, known as the Gene Bank (ROWLANDS, 1964), included two breeds of cattle (Longhorn and Chartley), seven breeds of sheep (Cotswold, Norfolk-horn, Lincoln Longwool, Manx Loaghtan, Woodlands Whitefaced, Soay and Portland) and five breeds of poultry (Silver Spangled Hamburg, Golden Campine, Lakenvelder, Sumatra Game, and Auracanas). The Society encouraged the use by bona fide research workers of the Gene Bank and wished to collaborate with other owners of similar breeds to exchange breeding animals to reduce inbreeding and foster conservation.

Unfortunately a few years later it was concluded that the Gene Bank did not fit with the principal objective of Whipsnade Park which is to display to the public animals of wild species. In order that the animals in the Gene Bank should not be slaughtered a small rescue operation was mounted. In 1969 part of the Gene Bank was transferred to the Royal Agricultural Society of England

(R. A. S. E.) showground at Stoneleigh and part to the University of Reading Sonning Farm. Some of the animals transferred and of their descendants are still being maintained at these two sites.

In 1964, at the time of the establishment of the Gene Bank, the Zoological Society of London set up a small committee (the Gene Bank Committee) to advise the Society on various matters concerned with breed conservation. In 1970 a member of that Committee, Prof. P. A. JEWELL, suggested that an attempt should be made to collate all the information available and to undertake a field survey on the population size and location of breeds thought to be in danger of extinction. This project was undertaken by myself and two students in 1970 with financial assistance from the R. A. S. E. and Mrs. WHEATLEY-HUBBARD, a Council member of the R. A. S. E. Information is still coming in as a result of the original enquiries but the main findings were published last year (BOWMAN and AINDOW, 1973). The result is that most of the owners of animals of the less common breeds of cattle, sheep and pigs are now known. The local knowledge of breeds and owners which was provided by the field staff of the Ministry of Agriculture, Fisheries and Food, National Agricultural Advisory Service and the Department of Agriculture for Scotland was invaluable. For those breeds for which there is some form of pedigree register and herdbook organisation, information of ownership is easier to obtain than in the absence of such an organisation. However, not all animals of a breed are necessarily registered and rules concerning the registration of crossbred animals differ between breeds. For these reasons, even where an active herdbook is being maintained, the statistics of population size provided by breed societies may be misleading for the purpose of determining whether a breed is in danger of serious inbreeding and possible extinction.

During the past few years there has been a marked increase in the interest shown by the general public in many aspects of conservation and domesticated livestock have been one of them. In order to cater for the recreational needs of the public and at the same time to give the urban dweller an opportunity to see the considerable variation in animals used in agriculture, a number of centres, called «Farm Parks», have been opened by private individuals. These «Farm Parks» contain collections of animals representative of breeds used in farming now and in the past. To see the animals, the public pay an entrance fee, which is intended to cover the costs of keeping the animals, of maintaining the display area and of providing the Park owner with an additional source of revenue. Some of the animals, which are of interest, are found in the grounds of large country houses which are opened for public viewing, and provide an additional attraction for visitors.

As the more traditional sources of revenue, such as Government research councils and Ministries had not been prepared to support financially the efforts to conserve breeds in danger of extinction, and because of the obvious growing interest by the public in looking at animals, a different approach was suggested. When the Gene Bank had been moved from Whippsnade Park, the Gene Bank Committee was replaced at the instigation of the R. A. S. E. by a Working Party consisting of several members of the original Gene Bank committee together with representatives of the R. A. S. E. and the Farm Parks. The Working Party considered that it would be possible to establish an organisation which would be supported by the general public. It became clear, partly as a result of the survey

of breed population size, that there were many people, with suitable areas of land and facilities on which to keep animals, who were willing for personal reasons and for public exhibit to maintain breeding nuclei of breeds which were not necessarily of immediate economic agricultural importance. The difficulties seemed to be twofold. The problem was that until the survey few of the people who wished to keep the stock knew the sources from which to buy animals of the less common breeds, seemed to be largely unaware of the demand for their surplus stock and were having difficulty in finding other owners with whom to exchange males to prevent inbreeding. Thus from the position 15 years ago when the need for breed conservation was considered to involve finance for the purchase and maintenance of animals the emphasis had changed. The real need was for a communication service to monitor the population size and ownership of breeds, to put owners and potential owners in touch with one another and to provide a field service for advice. Some purchases of animals might be necessary as an emergency action to prevent animals being slaughtered before new owners could be found. It was realised that this was a less demanding financial exercise than had been contemplated originally.

TABLE 1

RARE BREEDS SURVIVAL TRUST COMMITTEE MEMBERS

L. Alderson, Esq.	Lower Eastrip Farm, Colern, Wiltshire.
M. D. M. Ann, Esq.	Drusillas Zoo Park.
Professor J. C. Bowman.	Department of Agriculture, Reading University.
J. Cator, Esq.	Church Farm, Woodbastwick, Norfolk.
J. A. Cole-Morgan, Esq.	Agricultural Research Council.
* The Earl of Cranbrook.	President of the Trust.
C. V. Dadd, Esq.	Royal Agricultural Society of England.
* Sir Dudley Forward, Bt.	Royal Agricultural Society of England.
J. Green, Esq.	Council for the Preservation of Rural England.
* J. Henson, Esq.	Cotswold Farm Park and Chairman of the Trust.
Professor P. A. Jewell.	Department of Zoology, Royal Holloway College.
W. Longrigg, Esq.	Ministry of Agriculture.
A. J. Manchester, Esq.	National Pig Breeders Association.
Major C. Pitman.	Fauna Preservation Society.
Dr. I. W. Rowlands.	Zoological Society of London.
Mrs. E. R. Wheatley-Hubbard.	Boyton Farms, Warminster, Wiltshire.

* Indicates a trustee.

In the autumn of 1971 the Working Party arranged, with considerable help from the R.A.S.E., an Open Day at the National Agricultural Centre, Stoneleigh, to discuss breed conservation and to test the amount of support likely to be forthcoming from the public for the establishment of an organisation to fulfil the roles outlined above. Approximately 150 people attended, representing farmers and breeders, farm park and country house owners, conservation societies, scientific organisations and universities, city corporations with public parks, and the press. The meeting expressed, in words and by a financial collection, consider-

able enthusiasm for the establishment of an organisation to be called the Rare Breeds Survival Trust. Since then, individuals of the Working Party have presented the need for the Trust on radio and television and in scientific journals, magazines and the popular press. A professional administrator and fund raiser was employed on a part-time basis to manage a campaign to start the Trust. On May 19th 1973 the campaign was launched and the Trust established as a registered charity. A target of £30,000 was set to cover the first three years of operation. An advisory committee has been appointed (Table 1) representing a wide range of interests. The purpose of the Trust was stated as follows:

«The work of the Trust will fall into 4 main categories:

Information Bank—The building and maintenance of up-to-date information about owners, and animals—their whereabouts, number, breeding habits, environmental needs, and so on—is the first & foremost objective for without it there can be no preservation, no research and no education. Detailed records will provide the basis for archaeozoological research the results of which will be published. This information bank will throw up the need for

Direct Action to Preserve—The bringing together of owners through membership of the Trust so that breeding can be encouraged and facilitated. If necessary grants will be given towards the purchase of animals to prevent their slaughter, or the Trust itself will purchase them. If there is no other way to preserve a breed then the Trust will own and maintain breeding stock. It will encourage owners by arranging conferences, exhibitions and by the regular dissemination of information. The Trust may in certain circumstances hold or arrange for the holding of frozen semen for artificial insemination. The Trust will co-operate with Breed Societies and other similar organisations so as to ensure the best use of available resources. Preservation by itself is not enough and there must be

Research—To see that the gene bank thus created is used for the improvement of breeds currently in use and for the development of new breeds to meet the problems brought about by changing economic and environmental circumstances. These very changes demand

Education and Conservation—For the benefit of the wider public. Rare breeds of farm animals are just as much part of our national heritage as are ancient buildings. There must be opportunities for the public to view these animals and to learn about them. The Trust will encourage the setting up of farm parks and static exhibitions of high standard. It will promote press, radio and television programmes; it will publish scientific papers and leaflets of general interest.»

With What Species and Breeds of Animals is the Trust Concerned?

The Trust is concerned with the less common breeds of all species of domestic animals but initially it will concentrate its efforts among sheep, cattle and pigs; at a later stage it hopes to do more for the survival of the rarer breeds of horses, goats and poultry. The number of breeds in the three main categories above are too numerous to mention here but some of the following are thought to be in immediate danger, and others would be if it were not for the work of a few breeders and the Breed Societies.

Sheep—Black Mountain Welsh, Cotswold, Dartmoor White-faced (horned), Lleyn, Manx Loghtan, Norfolk Horn, North Ronaldsay (Orkney), Portland, Rhiw, Soay, St. Kilda, White-faced woodland and Limestone, Wiltshire Horn.

Cattle—British White Park, Dexter, Gloucester, Irish Moyle, Longhorns, Shetland.

Pigs —Berkshire, Gloucester Old Spot, Lincolnshire Curly Coat, Middle White, Oxford Sandy and Black, Tamworth, Ulster White.»

The Trust now has about 450 members who pay an annual subscription and has appointed a part-time technical officer. In addition it has received considerable financial support from various individuals, charitable trusts and commercial interests. One of its first major actions has been the purchase of a small island off the Scottish coast on which a group of North Ronaldsay (Orkney) sheep, which eat seaweed as a principal part of their diet, will be kept. The other activities given above which the Trust has decided to undertake have been started.

CONCLUSIONS

The story of domestic livestock conservation in the United Kingdom is perhaps most interesting because it shows how the recreational and environmental interests of the general public can assist in the work of conservation. It shows how the main burden of conservation with important long-term biological consequences can be met largely by income from a leisure activity with scientific and educational merit. Though the Trust is well established there are still some problems to be solved. Conservation can only be active if there is a regular population census on breeds and no foolproof way has been established for doing this yet. Also it is possible that resources will be insufficient to enable all breeds to be conserved if this is considered desirable. The question arises as to which breeds to conserve and which to allow to disappear. The F.A.O. study groups of 1966 and 1968 reported that breeds should be evaluated for their performance with respect to present or short-term future requirements. I believe this is wrong and that it is important where possible to establish the genetic relationship between breeds and to maintain those with distinctive characteristics indicative of unique genetic material irrespective of their present economic importance. The aim must be conservation of irreplaceable genetic variation—a biological resource. With the establishment of the Rare Breeds Survival Trust in the United Kingdom the likelihood of a breed becoming extinct as a deliberate policy is much reduced.

SUMMARY

Serious attempts to establish satisfactory and efficient means of conserving the less common breeds of domesticated livestock in the United Kingdom have been active for the past 15 years. However, only in the past year has an appropriate organisation (The Rare Breeds Survival Trust) been set up to raise the necessary supporting finance and to develop all the functions required to ensure the long term survival of several almost extinct breeds of cattle, sheep and pigs. Less attention has been paid so far to certain breeds of horses and poultry. The story of what has happened in this field in the United Kingdom is particularly

interesting, because the increasing need to develop recreational pursuits and amenity land use been an important element in the establishment of the Trust, even though the main reasons for breed conservation are more largely concerned with the long term need to maintain non renewable genetic resources and with providing the opportunity to study biological variation and evolution.

RESUME

Pendant quinze ans on a fait des essais sérieux à établir un moyen satisfaisant et efficace pour conserver les races les plus rares des bêtes domestiques que se trouvent en le Royaume Uni. Mais c'était seulement pendant l'année dernière qu'on a établi une organisation (The Rare Breeds Survival Trust) exprès pour obtenir la finance entretenante et essentielle, et pour développer tous les fonctions nécessaire pour la conservation, pour longtemps, de plusieurs races de bovins, de brebis et de porcs. Jusqu'à ce moment on a fait moins attention aux chevaux et à la volaille. Cet histoire au sujet de ce qu'on a fait déjà en le Royaume Uni, est forte intéressante parce que le besoin s'augmente de la développement de l'utilisation de la terre pour les poursuites divertissantes, et l'établissement de «The Trust» en a donné beaucoup d'opportunité, bien que les raisons les plus importantes pour la conservation des races rares sont plus pour conserver, pour l'avenir, les ressources génétiques, pas possibles à renouveler, et pour donner l'occasion à étudier leur variation biologique et leur évolution.

RESUMEN

Durante los últimos quince años se han realizado varios ensayos para establecer la manera de asegurar la supervivencia de especies domésticas en el Reino Unido. Sin embargo, sólo en el último año se ha creado un organismo, llamado «The Rare Breeds Survival Trust», para conseguir la financiación necesaria con el objeto de asegurar dicha supervivencia, a largo plazo, de algunas razas bovinas, ovinas y porcinas, casi extintas. Menos atención se ha prestado, hasta ahora, a ciertas razas equinas y de aves. La historia de lo que ha pasado en este campo en el Reino Unido es sumamente interesante. La necesidad creciente de crear motivos de actividad y zonas de recreo han llevado a la creación del «Trust», aunque las razones principales son las de conservación de razas más relacionadas con la necesidad de mantener, a largo plazo, los recursos genéticos no renovables, ofreciendo la oportunidad para el estudio de la variación biológica y de la evolución.

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