The free-living ponies within the Exmoor National Park: their status, welfare and future

A REPORT TO THE EXMOOR MOORLAND LANDSCAPE PARTNERSHIP

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Commissioned by the Exmoor Moorland Landscape Partnership

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1. INTRODUCTION

In March 2013 funds were made available by the Exmoor Moorland Landscape Partnership Scheme (EMLPS) and the Exmoor National Park Authority (ENPA) to commission a report upon the welfare, breeding and management of the free-living Exmoor Ponies within the Exmoor National Park. Following a tender process the author of this report was appointed to undertake the necessary research and to prepare the report.

2. EXECUTIVE SUMMARY

The free-living Exmoor ponies within the Exmoor National Park are a valuable asset to the amenity and heritage of the Park. They are divided into separate herds, each belonging to a moorland owner, some of whom are also moorland farmers. The breed is recognised as a 'Rare Breed' under UK and EC regulations and is considered to be a valuable genetic resource under the terms of the Farm Animal Genetic Resources (FAnGR) criteria. The Exmoor pony is therefore eligible for support by means of the 'Native Breeds at Risk' supplementary payments on land upon which a Higher Level Stewardship agreement is in place between land managers and Natural England. The widely held belief that the Exmoor pony is a direct descendant of the prehistoric wild horse or the wild 'British Hill Pony' is not supported by reference to documentary evidence or by recent genetic research.

The genetic diversity of the Exmoor pony is limited. It has suffered from a very small foundation population, when the breed standard was set in the early 20th century and from significant in-breeding since then. Maternal bloodlines have been lost and a few stallions have dominated the stud-book. Concern has been expressed about the future purity of the free-living Exmoor ponies because of the increasing presence of non-Exmoor ponies living freely on the moor. There are considerable difficulties in disposing of foals from free-living herds without consigning them to slaughter, but limitations on breeding risk further constriction of the genetic base of the breed.

There are no regulations or constraints upon farmers, graziers or landowners that compel them to safeguard the purity of the free-living Exmoor ponies. There is no mechanism or mandatory protocol whereby non-Exmoor ponies must be removed from the moor. Under current arrangements the survival of the Exmoor pony as a distinct type and colour of pony living freely on the moor is dependent solely upon goodwill and cannot be guaranteed. Large areas of Exmoor are in private ownership; the land owners are the only ones with the power to set and enforce terms of tenancy or grazing licences that would promote the Exmoor pony.

The Exmoor Pony Society has adopted DNA testing of each individual moorland pony as the method of establishing parentage; without this laboratory-based parentage verification ponies of typical Exmoor appearance and character cannot be registered in the stud-book. The intermixing of stallions of both Exmoor and non- Exmoor types amongst some of the moorland pony herds and the inability to be certain about the identity of the dam has given rise to considerable difficulties with the registration of foals using the DNA tests. These difficulties are not replicated in any other UK native pony breed. The misidentification of

some DNA samples has also complicated the scheme. Many fewer problems are encountered on securely enclosed areas of moorland where only one stallion runs with a group of mares, but over much of the moor boundaries are insecure and several fertile males are allowed to run freely.

The need to manage the breeding programme for the breed on Exmoor and to include and promote rarer bloodlines cannot be met by present management and husbandry arrangements. The insistence upon the DNA testing scheme risks losing valuable genetic material that is present on the moor. If the free-living Exmoor pony herds are to thrive and the distinct character of the rare breed is to be preserved on Exmoor changes in management and in the criteria for registration into the stud-book are recommended.

3. THE PROJECT BRIEF AND PERCEIVED PROBLEMS

The brief for the project posed a number of questions:

- What is a sustainable number of ponies to be bred on the moor?
- Is there a need for a breeding plan and if so, what does it look like and how should it be implemented?
- It is recognised that maintaining genetic diversity in Exmoor ponies is important.
  - Are there any “poorly represented bloodlines” that should be bred from as a priority?
  - Are there particular stallions or mares that are considered important and should be bred from?
  - Conversely are there individuals, particularly stallions, which have already passed their genes on to a high proportion of the next generation?
- There are some bloodlines that are no longer present within the free-living Exmoor pony herds. Should they be re-introduced?
- How beneficial is DNA recording? Could the process be improved?
- Is there potential to improve the market for these ponies and if so, how could this be achieved?
- How should the National Park Authority, the Exmoor Pony Society (EPS) and the Moorland Mousie Trust (MMT) support the pony breed and the moorland pony owners?

The Exmoor Pony Society supplied outline notes of the perceived problems, EPS being one of the three commissioning stakeholders in the project. These notes raised a number of additional questions and suggested some possible answers. The main points of this preliminary guidance from EPS may be summarised as follows:

- Too many foals are currently bred for a market that is very poor. This raises questions in respect of the ethical dilemmas associated with the humane slaughter of healthy youngstock.
- The market is much better for “made” ridden ponies.
- The market for ‘Conservation Grazing’ is not unlimited when the ponies live in good health into their late twenties.
- Moorland breeding is often indiscriminate. Would some form of contraception be effective?
- Problems with gathering and sorting ponies in recent years have meant that fertile colts have not always been cleared from the moor. These animals are not licensed and are therefore siring foals ineligible for registration.
- Would there be advantages in having secure moorland grazing for mares only, so that those having foals could be alternated to keep the pool of mares but produce fewer foals?

DNA parentage testing was introduced at a time when breeders were unable to be certain about foal parentage. The purpose of the test is to verify parentage and fulfil the criteria adopted by the Society for the registration of foals. The Society suggests that the moorland breeders have, in recent years, allowed more breeding of animals that are difficult to register by increasing mare numbers, failing to remove colts and by changes in management that have made offspring-dam identification more difficult.

The EPS can only advise. It is not in a position to control breeding.

The Society believes that there has been considerable overuse of some stallions just because they are available; sires have been passed between moorland breeders despite the sire already having made a significant impact upon the breed.

The Society believes that, on occasions, little thought given as to the genetic suitability of stallions for a given herd.

The Society would like to see the distinct foundation herds remain but with other herds having a better spread of the genetics.

The Society has recognised for some time that the genetic base should be on Exmoor but with all the genetics in groups away from Exmoor.

Currently the least represented breed genetics are rare amongst the herds on Exmoor but in the hands of 4 or 5 breeders away from the moor, with most in a free living herd in Scotland. The Society is aware of a wish to re-introduce these genetics to the moor but only if they can be safeguarded by a breeding programme.

The Society operates on a voluntary basis, with owners of registered ponies being encouraged to register transfers of ownership, gelding of colts and deaths, but such submissions to the Society records are on a goodwill basis only.

4. METHODS ADOPTED TO RESEARCH THIS REPORT

An initial meeting of the Steering Group for this project was held on June 6th 2013 at Exmoor House, Dulverton. Present at the meeting were:

Sarah Bryan, Head of Conservation and Access, Exmoor National Park Authority
Jason Ball, Exmoor Moorland Landscape Partnership
Matt Harley, Land Agent, Exmoor National Park Authority
Sandra Mansell, Exmoor Pony Society
Linzi Green, Exmoor Pony Officer, Moorland Mousie Trust
Robin Milton, Farmer, Exmoor Pony grazier, Exmoor National Park Authority Member

Following consultations at this meeting and subsequent individual meetings and discussions with Sandra Mansell (EPS), Linzi Green (MMT), Dr Sue Baker (EPS) and Robin Milton (farmer, moorland breeder, EPS, ENPA), a questionnaire was prepared to enable comparative interviews with moorland breeders. The breeders / owners of free-living Exmoor ponies were then interviewed and their opinions sought on both the current problems of the moorland herds and the possible solutions.

Other authorities and stakeholders were consulted, including land owners, land agents, EPS officers and officers of public bodies, statutory authorities and academics.

Contemporary peer reviewed scientific journals and historical texts were searched by means of the three search-engine facilities available through the Royal College of Veterinary Surgeons Trust Library in London and with the assistance of the librarians.

As many of the free-living Exmoor pony herds as possible were inspected between June and September 2013, taking note of bodily condition and the presence of apparently ‘non Exmoor’ type animals. Ponies were photographed and visually scored for body condition, signs of ill health and for any welfare problems.

5. THE PEOPLE AND AUTHORITIES CONSULTED FOR THIS REPORT

5.1 Pony herd owners, graziers and farmers

Mrs C Bigge
Gallon House
Simonsbath

Mr Nigel Binding
Ashton Farm
Countisbury

Mr & Mrs James Bryant
Kipscombe Farm
Countisbury

Mr & Mrs Peter Coldicott
Higher Hopcott Farm
Minehead

Mr & Mrs William Dart
Great Champston Farm
Molland

Mrs Jemima Edgar
Higher Blackland Farm
Withypool

Mr & Mrs C Eveleigh
West Ilkerton Farm
Barbrook

Mr & Mrs Nigel Floyd
Brendon Barton Farm
Brendon

Mrs Jill Langdon
& Mrs Jackie Ablett
Bulls Eye Luckwell Bridge

Mr Rex Milton
Partridge Arms Farm
West Anstey

Ms Lindy Mitchell
Linhay Cottage
Knightoncombe Farm
Withypool

Mrs L & Mr Ian South
Farley Water Farm
Brendon

Mr Malcolm Westcott
Wilmersham Farm
Porlock

Mrs Emma Wallace
Mounsey Farm
Dulverton

Mrs & Mrs R Werner
Lower Cott
Twitchen

Mrs & Mrs John Western
West Hawkwell Farm
Wheddon Cross

Mr Peter & Mr John Wyatt
Scoresdown Farm
Lynton

5.2 Land owners and Land Agents

Sally-Anne Cockerill
Landsense Professional
South Molton

Jeremy Holtom
Landsense Professional
South Molton

Peter Stucley
The Elms Estate Office
Bishops Tawton

Matt Harley
Exmoor National Park
Authority
Dulverton

Rachel Pavey
National Trust Office
Holnicote Estate

Christina Williams
The Molland Estate

Steve Mulberry
National Trust Office
Arlington Court

5.3 Exmoor National Park

Sarah Bryan (ENPA)
Matt Harley (ENPA)
Richard Eales (ENPA)
Jason Ball (EMLP)
Linzi Green (EMLP & MMT)

5.4 Exmoor Pony Society

Sandra Mansell
Robin Milton
Sue McGeever
Sue Baker

5.5 Geneticists and evolutionary zoologists

John Haslam,
Genetics Services Laboratory
Animal Health Trust
Newmarket

Vera Walmuth
Evolutionary Ecology Group
Department of Zoology
University of Cambridge

Libby Henson
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PO Box 251, Exeter Devon EX2 8WX

5.6 Natural England

Richard Andrews
Flemming Ulf-Hansen
Rural Development Service,
Natural England,
Taunton

5.7 Horse Passport, transportation and slaughter authorities and agents

Maria Endean
Trading Standards Officer
Devon & Somerset Trading
Standards
County Hall
Exeter

Levon Stephan MRCVS
DEFRA Animal Health
Clyst House, Winslade Park
Clyst St Mary

Stephen Potter
LJ Potter Ltd
West Harptree
Bristol

Paul Pearce
BG Pearce Ltd
Old Tellams Yard
Cheriton Bishop

6. RESULTS

6.1. The free-living Exmoor Pony herds and their owners

During the summer of 2013 (July – September) the owners of the free-living Exmoor ponies provided information about their ponies to the best of their abilities. Some herds had not been gathered for over a year, but most owners / graziers were able to give either an accurate indication of numbers or an informed estimate of numbers of ponies within their herds. The identities and locations of the free living herds are summarised as follows:

Name	Member	Prefix	Herd	Breeding?	Location
Ablett / Langdon	1007	Tawbitts	H17	Yes	Dunkery
Bigge	1086		421	No	Deer Park
Bryant	1637		423	Yes	Countisbury
Burrough			350	No	Woolhanger
Coldicutt	4392	Porlock Centurywest	100	Yes	Porlock Common
Dart	2180	Moorland	99	Yes	Molland
Edgar	2460		237	No	Withypool
ENPA	2510	Haddon	42	No	North Hill, Haddon
	2511	Warren	52	No	Warren
Eveleigh	2502	Ilkerton	265	No	Ilkerton
Floyd	8454	Tipbarlake	387	Yes	Brendon
Halliday/ Binding	3027	Ashton Farm	480	Yes	Countisbury
Milton	4020		23	Yes	Anstey, Withypool
Mitchell	4095	Knightoncombe	H8	Yes	Withypool
South	5220		H67	Yes	Blackpits
Sarah Taylor	5701	Greystonegate	470		
Wallace	5581		Anchor	Yes	Winsford
Werner	5750		44	Yes	Litton Moor
Wescott	5801		4	Yes	Dunkery
Western	5835	Hawkwell	12	Yes	Codsend
Wyatt	2590	Chains	H23	Yes	Furzehill Scoresdown

Figure 1. All the ponies were in good bodily condition between June and October 2013

From the owners' records or submissions to this report, the numbers of free-living Exmoor ponies believed to be running on the moor during the summer of 2013 can be estimated as follows (excluding 2013 foals). These ponies include animals for which the owners have EPS passports, or animals they believe can be registered in the stud book without difficulty. Non-Exmoor ponies and horses are excluded.

Area of the moor	Mares & fillies	Geldings	Stallions	Colts	Total
Dunkery	67		3	16	
Codsend	11		1		
Countisbury/ Kipscombe	47		1	2	
North Common / Ashton Brake	12		1	1	
Porlock Common	12		1		
Withypool Common	34	6	3	1	
Winsford Hill	40		1		
Brendon Common	70	3	2	3	
Blackpits	18		1		
The Chains/Scoresdown/Furzehill	10				
Ilkerton Ridge	4				
Anstey Common	20	13	1		
Litton Moor	8		1		
Deer Park	5	1			
North Hill, Haddon, Warren	58				
Molland	28	2	1	9	
Totals	444	25	17	32	
				Grand total	518

6.2 The health and welfare of the individual free-living Exmoor ponies

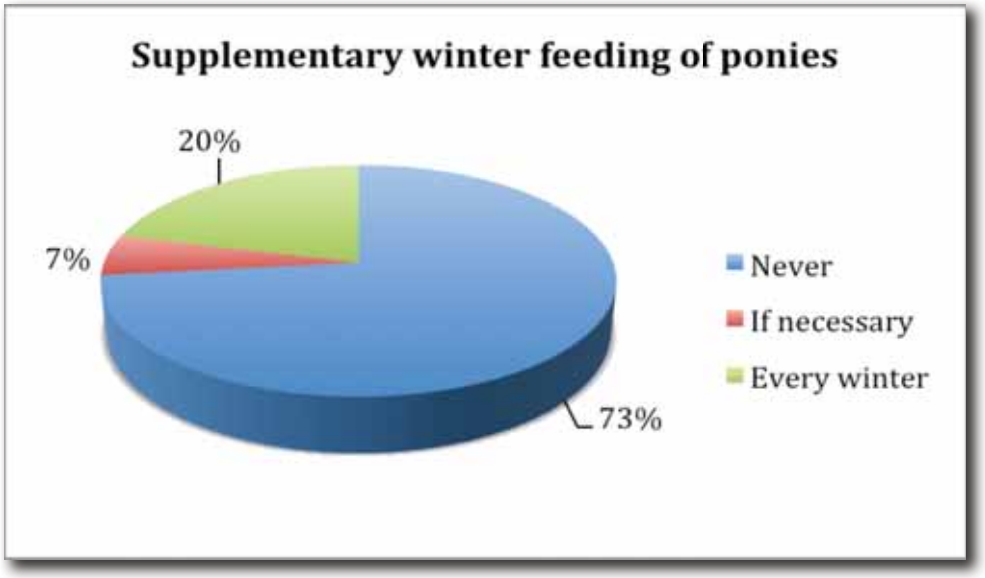
Veterinary inspection of the ponies between June and October 2013 revealed no evidence of any compromise of welfare attributable to diet or habitat. All animals inspected on all areas of the moor were judged to fall between acceptable limits of Body Condition Score according to the Code of Practice for the Welfare of Horses, Ponies, Donkeys and their Hybrids annexed to the Animal Welfare Act of 2006, although none were manually palpated. In summer months the limitations of visual inspection, compared with palpation, are minimised because of thinner summer coats.

None of the inspected ponies showed evidence of unreasonable overgrowth of hooves. None were scouring or showing evidence of parasitism. There was no evidence of respiratory disease.

Figure 2. There was no evidence of overgrown hooves

6.2.1. Supplementary winter feeding

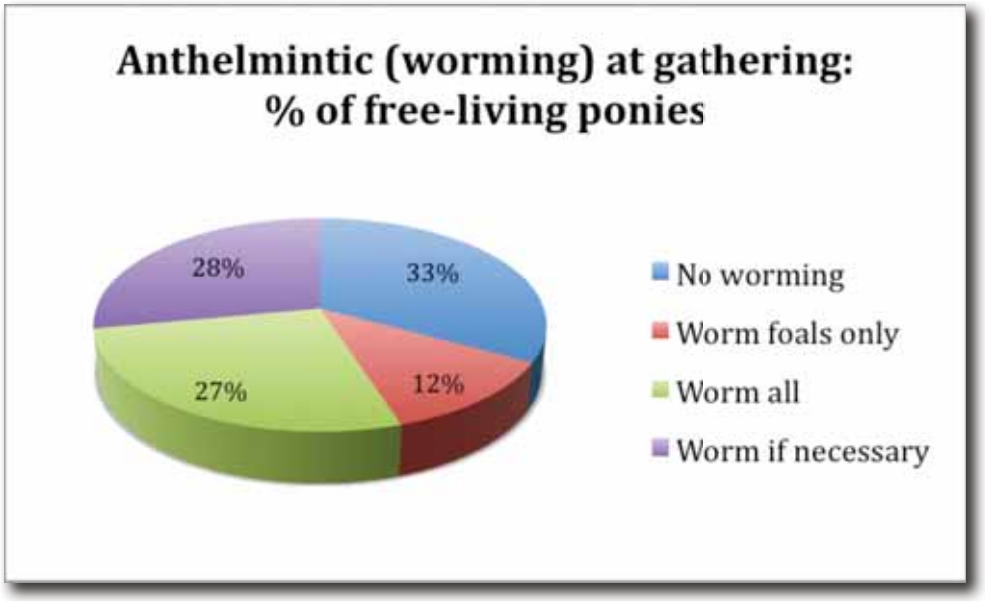
Twelve of the moorland herd owners stated that they did not provide any supplementary forage for the ponies, even in very harsh winter weather. Several expressed the view that this was unnecessary because the ponies were 'wild' and that they had evolved to cope with Exmoor winters. These owners represented some 73% of the ponies on the moor. Three owners, representing some 7% of the free-living Exmoor ponies, stated that they provided supplementary forage if it was necessary in extreme weather. Three owners, responsible for some 20% of the ponies stated that they put out hay at least once each winter.



6.2.2 Anthelmintic treatment

Herd owners were asked about their anthelmintic (worming) practices with the ponies for which they were responsible. Thirty-three percent of the ponies, belonging to 7 moorland owners never received any wormer, irrespective of age or condition. Six owners, responsible for approximately 27% of the ponies, stated that they attempted to worm all the ponies at gathering, either by in-feed medication, or by pour-on products or by injection with cattle anthelmintic preparations. Two owners of some 12% of the ponies between them routinely wormed their weanlings but not adults, and the remaining three owners (28% of ponies) stated that they would worm an animal of any age if it looked poor and should be in better condition at gathering.

Figure 3. 39% of foals receive a wormer at weaning



These responses must be interpreted in the light of the fact that significant numbers of ponies have not been gathered for several seasons at the time of writing (October 2013)

There is no doubt that free-living Exmoor ponies come squarely under the terms of the Animal Welfare Act 2006, which means that herd owners, landowners and farmers ('keepers' as far as the Act is concerned) have a responsibility to safeguard the welfare of the ponies. This applies to individual animals as well as populations. The Act updated the provisions of the 1911 Protection of Animals Act and, for the first time, places a duty of care upon keepers to provide suitable environments, feed and living conditions for domestic animals so that the *risk* of suffering is anticipated and avoided. This section of the Act has important implications for Exmoor ponies: although they are allowed to live freely and fend for themselves throughout the winter, there is evidence that even the most robust of pony breeds suffer if they are deprived of even a proportion of their maintenance requirements for a prolonged winter period[4]. Faced with a very severe winter, their keepers cannot ignore the requirements of the ponies and it is no longer acceptable to adopt the attitude that they are as wild as the red deer and as able to cope with prolonged exposure to inclement weather.

There is no recognition of 'wild' or 'feral' horses in the legislation. In fact, attention is turning to the responsibility of landowners and land managers to the welfare of the truly wild animals on their properties. Scottish Natural Heritage have commissioned reports into wildlife welfare and the possible consideration of legislation to ensure that land managers take account of wild animal welfare in the decisions they make about agricultural and landscape management. Such legislation is already in place in some EU member countries[25, 26].

Animal Welfare and Animal Rights in the countryside and farming context are popular campaign issues, especially for well-meaning but possibly more metropolitan campaigners. Winter die-offs of wild animals and 'feral' ponies in the 56 square kilometre Oostvaardersplassen nature reserve have caused public outcry in the Netherlands. Exmoor ponies suffering or even dying on the moor as the result of severe weather, senility or disease would inevitably cause similar public reaction here and would no doubt trigger legal action under the 2006 Act.

The evidence laid out later in this report leaves no doubt that the free-living Exmoor pony should be considered as a domesticated native breed that is currently permitted to range freely under minimal husbandry. There are derogations to permit these ponies to be excluded from the Horse Passport Regulations (although as the report will show, this is

far from straightforward), but they are not excluded from the Animal Welfare legislation. In the event of an outbreak of equine disease landowners, herd owners and farmers would have responsibilities under the Law to deal with the free-living Exmoor ponies in exactly the same way as they would their hunters, point-to-pointers and childrens' ponies. Moreover if the disease were Notifiable, the free-living Exmoor ponies would not be afforded any special status by the relevant authorities.

6.2.3 Casualties and losses

From the responses received it appears that across the whole population of free-living Exmoor ponies the herd owners expect to lose between perhaps 10 and 12 ponies each year to traumatic incidents. This is based upon the information they provided about such losses in the past three years. Most of these losses are attributable to road traffic accidents, although when ponies have been encountered with severe wounds, broken limbs or are found dead, road traffic has been blamed when by no means all of the incidents were verified. Dog worrying was blamed for some losses and two herd owners blamed mounted hunt followers and quad-bike hunt followers for incidents that resulted in the loss of a pony.

Slightly more worrying is the report that perhaps up to 20 ponies have simply 'gone missing' in the past three years across the moor and have not been accounted for by discovery of carcasses. There is a feeling that this is a reflection of the horse-meat trade, but none of the three herd owners who mentioned this phenomenon were able to offer any information other than speculation.

6.2.4 Sale and disposal of weanlings and youngstock

All the herd owners expressed grave concerns about the market for Exmoor youngstock. Responses indicated that in the three years before the survey was conducted (ie. 2010-12 inc.) 50% of the owners had consigned some animals, especially colts, to the meat trade. Three owners had either bred no youngstock or had retained the foals. The herd owned by the Exmoor National Park Authority is a non-breeding herd. Private sales had accounted for the disposal of some ponies from half the moorland herds, but five of these herd owners had succeeded in selling only some of their stock and had also sent some to slaughter. Conservation grazing had taken a small number of ponies from three herds and the Moorland Mousie Trust was credited with taking ponies from four herds over this period. One owner had killed ponies in ground and used the services of the fallen stock contractors rather than send animals to the abattoir.

These disposal records were, for the most part, based upon the memories, rather than the paperwork of the herd owners and did not accurately reconcile with information supplied by the Moorland Mousie Trust. Nonetheless, it is very clear that the disposal of Exmoor pony youngstock poses a major problem to the herd owners. This will be considered at 7.2.5. below.

6.3 The purity and genetic integrity of the free-living Exmoor ponies and the implications for the breed.

The Exmoor Pony Society is understandably concerned to maintain the genetic health of the breed. This is reflected in some of the questions posed by the commissioning panel for this report:

> It is recognised that maintaining genetic diversity in Exmoor ponies is important.
>
> Are there any "poorly represented bloodlines" that should be bred from as a priority?
>
> Are there particular stallions or mares that are considered important and should be bred from?
>
> Conversely are there individuals, particularly stallions, which have already passed their genes on to a high proportion of the next generation?
>
> There are some bloodlines that are no longer present within the free-living Exmoor pony herds. Should they be re-introduced?

Before these questions can be considered, it is important to consider whether the registered, pure bred Exmoor Pony is safeguarded from cross breeding with non Exmoor ponies when herds are allowed to run freely on the moor. If it is ***not*** possible to be certain that only registered Exmoor Ponies will be present on the moor, it will be pointless to implement breeding strategies to optimise the range of bloodlines present on the moor or to restrict in-breeding within families of ponies within the breed. Four questions must therefore be answered before any discussion of a breeding plan for the free-living Exmoor ponies can be considered:

> Are there significant numbers of non-Exmoor ponies loose on the open areas of Exmoor moorland?
>
> If there are such animals on the moor, to what extent are they restricted in their range?
>
> Are there any regulations, binding obligations or statutory powers to remove any non-Exmoor ponies from the moor and to restrict or prevent further introductions of non-Exmoors?
>
> If the need to remove non-Exmoor ponies is agreed and all parties in the agreement co-operate in gathering the animals, do current regulations assist or hinder the removal of non-Exmoor ponies from the moor?

6.3.1. Are there significant numbers of non-Exmoor ponies loose on the open areas of Exmoor moorland?

Interviews with landowners, herd owners, farmers and graziers together with inspection of ponies on the moor as part of the work on this report have all confirmed that there is a sizeable population of ponies on Exmoor that do not conform to the breed standard for the Exmoor Pony. The origin of these horses and ponies is unclear and to some extent disputed. Several graziers and farmers have reported that ponies have been "dumped" or abandoned on the open moor, presumably by private owners who can no longer afford to keep them and who fear that disposal through auctions, markets or dealers will condemn the ponies to the slaughterhouse. There is credible evidence that this has occurred on Dartmoor, Bodmin Moor and in the New Forest and the author of this report has personal experience of dealing with such difficulties in the Republic of Ireland; there is no reason to suppose that Exmoor is immune from this risk. There are long stretches of quiet roads across the moor where horses could be unloaded and set free without detection. Graziers and herd owners on Brendon Common, The Chains, Molland

Common and Winsford Hill report that they have experience of the appearance of ponies that are either clearly non-Exmoors, or prove to be unidentifiable when they are gathered.

There are also allegations that some farmers and / or graziers less sympathetic to the Exmoor as a breed have deliberately turned out non-Exmoor ponies, either to breed them for consignment to the meat trade or to breed cross-bred animals that have a greater value as riding horses than pure bred ponies. Suggestions have also been made that some farmers / graziers have been encouraged to breed increased numbers of ponies by the supplements available through the Higher Level Stewardship (HLS) scheme administered by Natural England. None of the farmers or graziers interviewed for this report have (unsurprisingly) admitted to this, although it is clear that a number of farmers have been engaged in commercial horse or pony breeding and that boundary fences between in-ground fields and the open moor are relatively insecure. It is also apparent that non-Exmoor ponies and horses have been present and breeding on parts of the moor for many years and that grazing rights have changed hands with such animals in place.

Figure 4. This pony, running free on the Chains in September 2013, is clearly not an Exmoor

Certain parts of Exmoor appear, at present, to be free of non-Exmoor equine stock, but the discussion at 6.3.3. (below) will show that this cannot be guaranteed under present regulations. To be specific, Dunkery, Codsend, Countisbury, Porlock Common, Withypool Common, Winsford Hill, Haddon Hill, Deer Park, Warren, North Hill and Litton Moor appear at present to hold no non-Exmoor ponies, although there have been reports of such animals in the past and a few have been removed from these areas. For some of these areas, this is no doubt due to their isolation, private ownership or secure ring-fencing. For others it appears to be a matter of good fortune to date, since areas such as Dunkery and Withypool Common provide ample opportunity for the dumping of unwanted horses or ponies. Non-Anchor ponies have been found on Winsford Hill, but none appear to be present at the time of writing.

There are prominent ponies on Molland Common, The Chains, Furzehill, Scoresdown, Ilkerton Ridge and Brendon Common that are clearly not typical of the Exmoor breed. A number of these are fertile (ungelded) males and there is no reason to suppose that the mares are not fertile. During the course of the work for this report, grey ponies, bright bay ponies and ponies with prominent facial stripes, stars and white socks have been recorded. The problems with DNA parentage verification on West Anstey Common and Blackpits indicate that there are or have been non-registered ponies running there from time to time that have complicated the genetic analyses.

Figure 5. Non Exmoor ponies and halfbred foals on Brendon Common in August 2013

There is therefore no doubt that, at present, over a large area of Exmoor, the free-living Exmoor pony herds are co-habiting with fertile non-Exmoor animals. Cross breeding is inevitable; the Exmoor stallions will not have exclusive rights to the Exmoor mares, indeed some of the non-Exmoor stallions and colts are larger and more dominant than the pure-breds. The population dynamics and herd hierarchies of feral pony herds are very well documented; satellite colts will cover some mares despite the efforts of the herd stallion and some mares will sneak off to be covered by rival males. At present the genetic integrity of the pure-bred Exmoor pony cannot be safeguarded on the areas of the moor where non-Exmoor animals are living.

6.3.2. If there are such animals on the moor, to what extent are they restricted in their range?

Stallions are notorious for their ability and determination to break through fences, gates and boundaries. Routine stallion stud fencing needs to be robust, high and regularly maintained. Exmoor mares are tough, strong and often wilful in character. Exmoor banks and hedges prove no obstacle to such animals, especially if there are horses and ponies of any breed on the other side of a moorland boundary. Large areas of mid and south Exmoor have contiguous boundaries: Brendon Common, Furzehill Common, Ilkerton

Ridge and The Chains can be regarded as one continuous open moorland landscape. Boundaries are insecure, gates are left open and ponies appear to roam freely across this area, which is populated by a significant number of non-Exmoor horses and ponies. Estimates by the graziers vary, but in September 2013 two of the relevant graziers independently expressed the view that there were between 150 and 200 non-Exmoor equines roaming this combined moorland. The boundary between Molland Common and West Anstey Common has been equally problematic, although the fence has been reinforced in 2013.

Figure 6. A bay non-Exmoor stallion was seen moving between Brendon Common and Blackpits in July 2013

The records of the Exmoor Pony Society and their DNA parentage verification data show that herds on enclosed and secure moorland ranges, separated from other areas of moorland that support pony herds generate a low incidence of problems for Exmoor Pony registration and parentage confirmation, although even these herds do not have 100% success with DNA parentage matching (see 7.2.1 below). Such herds are found at Winsford Hill, Countisbury, North Common, Ashton Brake, Codsend and Porlock Common. Where free-living moorland herds occupy adjacent ground to other herds problems increase and where non-Exmoor ponies are present the problems of registration become immense, even for animals that appear to be true to type.

6.3.3. Are there any regulations, binding obligations or statutory powers to remove any non-Exmoor ponies from the moor and to restrict or prevent further introductions of non-Exmoors?

The Exmoor Pony Society believed that an agreement was in place that only registered purebred Exmoor Ponies should be allowed to over-winter on the moor. This belief can be traced back to an agreement with The Ministry of Agriculture Fisheries and Food in relation to the original Environmentally Sensitive Area (ESA) agreements. The draft proposal was that all cattle and ponies should be removed from the moor between October and April. The EPS and ENPA succeeded in changing the scheme so that registered Exmoor Ponies could remain on the moor year-round.

The administration of ESAs by the Ministry of Agriculture, Fisheries and Food (MAFF) was incorporated under the umbrella of the European Community's 'Agri-Environment Programme' which aims to protect the environment and the countryside through the promotion of farming practices that safeguard and restore important habitats and which enabled grants to be part-funded through the Community. The scheme was incorporated

into the England Rural Development Programme on 1 January 2000.

The ESA scheme closed to new applications in 2004 with the introduction of the Environmental Stewardship Scheme. Existing agreements continue to be honoured; the last agreements will expire in 2014. The scheme is currently administered by staff at Natural England, which now also administers the Environmental Stewardship Schemes introduced in 2005.

Consultations with Natural England have now confirmed that the scheme prescriptions that restricted over-winter grazing on Exmoor moorland under agreement only to registered Exmoor Ponies (and sheep) lapsed with the changes from the ESA Scheme to the Environmental Stewardship Scheme.

Under the present scheme and agreements, landowners, commons committees, farmers, graziers and tenants can apply for grants to encourage habitat stewardship at one of several levels. The Entry Level Stewardship (ELS) scheme is a points-based scheme open to all farmers and land managers that is designed to deliver target outcomes in terms of countryside stewardship. There are supplementary payments per hectare under Upland Entry Level agreements for land within the designated 'Severely Disadvantaged Areas (SDAs), although points targets for such land are higher. The Exmoor National Park moorland is designated as part of the SDA. There are no general mechanisms within an Entry Level Stewardship scheme for the prescription or specific designation of one particular breed of pony on any parcel of land under the terms of such an agreement.

The Higher Level Stewardship (HLS) scheme represents a more demanding level that asks a farmer or land manager to achieve more in terms of habitat conservation or restoration. It requires a greater input in management terms, and so attracts higher payments, although the actual payment varies according to the management required under the specific agreement. Under HLS schemes supplementary payments may be available for grazing by 'Native Breeds at Risk' and eligible breeds are listed under the supplement HR2 of the HLS handbook. For cattle the list includes Devon Red, Longhorn, Belted Galloway and Highland, together with some seventeen other breeds. The presence of significant numbers of Highland cattle on parts of Exmoor is testimony to the implementation of HLS agreements that have specified this breed for grazing, thereby attracting the supplement on a hectarage basis. The breed is specified in the agreement in response to a request from the applicant because the applicant has pedigree beasts of the 'specified breed'. The Native Breeds at Risk list for horses and ponies gives fourteen breeds that may attract the HR2 supplement. These include the pony breeds such as the Exmoor, Dales, Eriskay, Fell, Highland and Shetland together with horse breeds such as the Cleveland Bay, Suffolk and Shire.

Figure 7. The presence of Highland cattle on Exmoor is testimony to the 'native breed at risk' supplement available under Higher Level Stewardship

Natural England has confirmed that they are not bound only to accept proposals for grazing Exmoor ponies from applicants seeking Native Breed at Risk payments under an HLS agreement on Exmoor. Each agreement is negotiated with the applicant on a case-by-case basis with guidance from local, knowledgeable Natural England officers, who would encourage the use of a breed appropriate to the moor. To date no applications appear to have been received for HR2 supplements for specified pony breeds on the list other than Exmoors, but Natural England has no power to refuse such an application. Exmoor is not a special case and the Exmoor Pony has no special status under HLS regulations for Exmoor, compared with, for instance Highland ponies or Shetlands. Since 2011 the HR2 Native Breed at Risk Supplement has not been available on shared grazing/commons agreements but is only available on sole occupancy areas of moorland.

In some circumstances an agreement may specify the particular breed of cattle or pony under Section HL9 or HL10 (maintenance and restoration of moorland); such specifications are agreed by applicant and Natural England during the negotiation and will not attract the HR2 supplementary payment. It may, for instance be appropriate where the applicant cannot achieve the necessary "livestock unit grazing days" on the moorland in question by the use of cattle alone and therefore by agreement ponies are included to make up the units. Again, although Natural England may encourage the use of Exmoor ponies under such agreements and Exmoors may be specified when the agreements are finalised, Natural England is not constrained or legally obliged only to accept proposals for Exmoor Ponies on Exmoor.

The HLS Handbook makes it clear that "only pedigree-registered animals and/or their genetically traceable, purebred offspring are eligible" for HR2 payments under the scheme "because of the need for independent verification by the relevant recognised-breed society". The purpose of this restricted eligibility is to ensure that 'Native Breeds at Risk' are promoted and that the breeds are supported; evidently guidance has been issued that HR2 supplements should only be approved for breeding herds, as non-breeding herds clearly do little to contribute to the survival of the breeds in question. It is by no means clear, however, where the responsibility lies for ensuring that this restriction is enforced. When agreements are negotiated and set up, Natural England requires sight of pedigree or studbook certification of the animals to be included in the proposal. Once the agreements are in place, however, Natural England has indicated that it is up to the applicant (or by that stage the agreement holder) to ensure that the integrity of the pedigree stock is maintained.

When specifically asked whose responsibility it would be to remove a non-Exmoor stallion that was breeding with Exmoor ponies that were part of an HR2 supplementary payment or other payment scheme where Exmoor ponies had been specified, Natural England has responded to this report by making it clear that they consider it would be the responsibility of the applicant/recipient to take action to make sure that the terms and indicators of success of the agreement were being fulfilled. This is clearly problematic, since the supplementary payments are made on the basis that they are encouraging and supporting "only pedigree registered animals and their genetically traceable purebred offspring" but there is no mechanism once an agreement is in place by which cross breeding with non pedigree stock can be prevented.

Figure 8. There are no regulations that compel the removal of ponies that clearly fail to meet the breed standards from the moor. This stallion was seen covering branded Exmoor mares on Molland Common.

On Exmoor some thirteen HLS agreements specify Exmoor Ponies with HR2 supplement payments, including EPNA as part of their agreement for The Chains. Ponies are considered beneficial as conservation grazers[2] and applicants are therefore encouraged to put ponies into the mix when applications are drawn up. Natural England has confirmed that even if a number of Exmoor Ponies is specified in an agreement, there is nothing to stop a farmer or land manager turning out extra ponies or horses, over and above the specified number or percentage, and that Natural England would take no view of such a practice, provided that other aspects of the agreements were not contravened and the habitat were not adversely affected. The enquiries for this report have found no evidence that Stewardship Schemes encourage the over-breeding or indiscriminate breeding of ponies on Exmoor, since the numbers of Exmoor ponies included in the HLS agreements are relatively small.

In summary, there is nothing within the ELS or HLS Stewardship Schemes that reserves Exmoor moorland grazing for Exmoor Ponies, or indeed for Devon cattle. Natural England does not believe that it is their responsibility to take action if non-Exmoor ponies are breeding with purebred Exmoors and takes no view of the numbers or identity of additional ponies or horses loose on the moor, provided that their presence does not adversely impact the environment.

Attention therefore passes from the various Stewardship Schemes to the more fundamental relationships on the moor: those between landowner and tenant or between landowner and commoner. Of the areas of the moor that support free-living Exmoor Ponies, the majority is in private, rather than public ownership. Some, such as The Chains, Haddon, Warren, North Hill and Dunkery belong to EPNA or the National Trust and can be considered to some extent publicly owned land. Other areas are owned by trusts or holding companies, such the Badgworthy Land Company, which owns Brendon Common, but a very significant number of the home ranges of the various pony herds are in private ownership. Withypool Common, Molland Common, Codsend, Porlock Common, Litton Moor and others are in single ownership. Anstey Common is in several private ownerships but is grazed “in common” without boundaries between landowners.

Enquiries with land agents, land owners, tenants and commons register secretaries have indicated that in almost all cases grazing and tenancy agreements do not specify "Exmoor Ponies" where horses or ponies are mentioned in the grazing rights. Some longstanding grazing leases and agreements mention "ponies", others use the term "equines" and some even revert to the more ancient "horses". Few, if any specifically restrict the grazing of equines to Exmoor Ponies. It is therefore clear that graziers, tenants or commoners are contravening no part of their grazing licences or tenancy agreements by allowing non-Exmoor ponies to roam freely on the various moors and commons to which they have the grazing rights.

Landowners who take responsibility for the ponies on their own private landholdings are under no obligation to restrict the grazing of horses and ponies to pure, registered Exmoors, but it is plain that it is the landowners alone who have the power to regulate and enforce the identity of the ponies on Exmoor. At present the predominance of Exmoor and Exmoor-type ponies on the open moor is mainly driven by goodwill on the part of the parties involved, but such goodwill cannot be guaranteed for the future. Only the landowners can set the conditions of the tenancy and grazing agreements as they are reviewed. A restriction of equine grazing to registered Exmoor ponies across the whole National Park would require the co-operation and agreement of all the landowners involved.

At present a change of land ownership or an inheritance could quite conceivably see significant landholdings passing into the hands of those with little sympathy for Exmoor Ponies. The Exmoor breed is well represented in the uplands of Cumbria and Scotland, where they are not 'native' to the areas and where they qualify for HR2 supplementary payments; there is nothing to prevent an Exmoor landowner replacing Exmoors with Fell Ponies or Highland Ponies in a perverse reversal of such translocations.

6.3.4. If the need to remove non-Exmoor ponies is agreed and all parties in the agreement co-operate in gathering the animals, do current regulations assist or hinder the removal of non-Exmoor ponies from the moor?

The landowners, graziers, tenants and herd owners responsible for the areas of the moor where there are clearly problems have all given indications to this project that they are willing, and in most cases keen, to gather all the ponies from areas such as Brendon Common, The Chains and Molland Common and to resolve difficulties of registration, identification and removal from the moor. There are, however, significant obstacles to such exercises. These arise from three separate factors, which are connected but not completely interdependent.

The first is the difficulty of registering ponies into the Exmoor studbook when the presence of unregistered sires has inevitably made parentage testing by DNA analysis impossible (see 7.2.1 below). The rules of the Exmoor Pony Society make it clear that animals can only be admitted to the main section of the studbook if both sire and dam are already registered there and parentage can be proved "as defined in the appropriate legislation" (Rule 8). The legislation in question is the 'Entry and Registration of Equidae Criteria in Stud-books for Breeding Purposes Regulations 2003' (S.L.437.36), which is the domestic legislation flowing from European Commission Decision 96/78. Both these statutes refer to an earlier EC Decision (92/353) that gives authority for the UK Government to recognise and appoint the various breed societies and organisations that maintain equine stud-books.

The legislation specifies that an equine can only qualify for entry in the main section of the stud-book if it "is descended from parents entered in the main section of the stud-

book… and have a pedigree established in accordance with the rules of that stud-book". In the case of foals, the foal can be entered into the stud-book if it can "be identified as a foal at foot according to the rules of the stud-book, which at least should require a covering certificate". The Exmoor Pony Society has taken legal advice that has indicated that 'breeders best knowledge' of the sire of a free-living Exmoor pony is insufficient to fulfil the criteria of this legislation (see May 2013 AGM) and therefore has adopted DNA parentage testing for the moorland herds and ponies as the only accepted and acceptable proof of parentage. This scheme will be discussed in detail at 7.2.1 below, but in respect of the clearances of ponies from the moor, the rules inevitably prevent the registration of animals that fully meet the breed standards of size, appearance and action. This is a considerable obstacle in the opinion of several of the moorland herd owners, since ponies registered in the main section of the stud-book are issued with a cream-coloured passport, which verifies their status as 'pure Exmoor' and enhances their desirability to the pony world and increases their value. Unregistered ponies are worth much less and herd owners are frequently faced with extended delays whilst attempts to verify parentage are made and may eventually be unsuccessful. Some have sold ponies in good faith that there will be no difficulty with the registration, only for the purchasers to find themselves with an unregisterable pony- a situation that has generated considerable ill-will.

Figure 9. Unbranded, unregistered free-living ponies do not come within the terms of the current legislation.

The second difficulty is the dilemma of the disposal of gathered ponies. Fully registered, cream-passported Exmoor ponies, especially the colts, are not in great demand. Part-bred, cross bred and unregistered ponies have almost no value. The current (2013) equine commercial market is characterised by a glut of unwanted ponies of poor quality from all parts of the UK. Equine charities are overwhelmed by large numbers of 'rescued' ponies. One pony dealer/breeder owned between 1,500 and 2,500 ponies and cobs when convicted of cruelty offences in June 2013 and was ordered by the court to dispose

of them before beginning a prison sentence (RSPCA v Price, Cardiff Crown Court). Regular contacts with welfare charities confirm that 'sanctuaries' are full. Enquiries with the horse-slaughtering abattoirs for this project confirm that during the autumn there is almost no meat market for ponies, since demand is more than met by large horses and purpose-bred large cobs (S. Potter 2013). Should an autumn gathering from Brendon Common, The Chains or Molland Common be organised and unwanted, unregisterable, unhandled and unbroken ponies were to be confined to yards and handling facilities there would be little or no market for them, even for meat.

The third obstacle to removal of unregistered ponies from Exmoor is purely of the making of the Exmoor Pony Society itself. The Horse Passport Regulations 2009 (SI 1611.2009) make it an offence to own, sell or transport an equine animal, whether considered domesticated or 'wild', without an approved passport. If the animal was born after 2009 or if the first passport for the animal was issued after 2009 it is also an offence to own, sell or transport the horse without the presence of an implanted identification transponder (a microchip). Foals must be passported and microchipped before they are six months old or before December 31st of the year in which they were born, whichever comes sooner. This Statutory Instrument enshrines the provisions of EC Regulation 504/2008, which provides the full framework for the identification and documentation of individual horses in the EU.

The EC Regulation makes provision for derogations to be available to member governments whereby horses being transported directly from the holding of birth to the abattoir may be exempt from the requirement to have a passport and microchip, provided they are individually identified and each consignment of horses to the abattoir is catalogued for cross referencing and traceability. There are also derogations available for free-living or feral horses to be exempt from the requirement to have passports and microchips. When the UK Government was consulting about the wording of the Horse Passport Regulations, the free living ponies on Dartmoor, Exmoor and the New Forest were considered and the respective authorities consulted about the implementation of EC regulation 504/2008. The result of this consultation is that the legal constraints upon the free-living ponies on Exmoor differ significantly from those upon ponies on Dartmoor, the New Forest and Bodmin Moor. Regulation 18 of the Horse Passport Regulations specifies the derogations permissible in the UK for free-living ponies on what are called 'designated areas' under Article 7 of the original EC statute. The designated areas are Dartmoor, The New Forest and Exmoor, as defined by maps lodged with the Secretary of State (Bodmin Moor has come under such designation more recently). On Dartmoor, Exmoor and The New Forest Regulation 18 states that:

> The derogation in Article 7 of Commission regulation 504/2008 applies in relation to horses-
>
> (a) identified in the lists kept by the Verderers of the New Forest ***or*** entered in the stud-book of the New Forest Pony Breeding and Cattle Society.
> (b) identified in the lists kept by the Dartmoor Commoners' Council; or
> (c) entered in the stud book of the Exmoor Pony Society.

The criteria whereby defined populations of ponies living under wild or semi-wild conditions do not need to be identified with passports or microchips whilst they remain in the designated areas are therefore different for the three designated areas. In the New Forest ponies can either be registered in the stud-book or simply listed by the Verderers. On Dartmoor ponies need only be listed by the Commoners' Council, but on Exmoor ponies must be entered in the stud-book of the Exmoor Pony Society. This criterion was proposed by the EPS and accepted by the Secretary of State when the Horse Passport Regulations were drafted.

It will be clear that the higher standard of registration for Exmoor, compared with Dartmoor and The New Forest, creates considerable difficulties. Horses and ponies running on Exmoor that can never be entered into the EPS stud book because of their colour, size and obvious non-Exmoor appearance are in breach of the Law if they do not have passports and a microchip, since they do not come under the derogation of Regulation 18. Owners, keepers and landowners are therefore committing offences by failing to obtain passports for these animals and failing to have them microchipped. The Exmoor Pony Society is an authorised Passport Issuing Organisation (PIO) under the legislation and can therefore issue a passport to any horse or pony of any size or colour, but animals that do not have both proven parents already in the stud-book cannot be 'entered into the stud-book' of the Society. The stud-book admits only two categories of animal: ponies that meet the breed standard and have parentage verified by DNA (section I of the main part of the stud-book) and ponies that do not meet the breed standards but whose parentage can be verified (section X) and whose sire and dam are already registered in the stud-book (Rule 8). For registration into either section of the stud-book the pony must be microchipped (Rule 9). Given the considerable difficulties of establishing parentage for the ponies running on large parts of Exmoor, where gatherings have been infrequent or inefficient, this places all these ponies on the wrong side of the Law, even those that would pass inspection and meet the breed standards.

The landowners, herd owners, farmers and land agents are aware of the difficulties raised by the Horse Passport Regulations and some are reluctant to organise or to agree to gatherings of the ponies until these difficulties are addressed. There is considerable feeling that the Exmoor Pony Society has made the situation more difficult than was necessary. Free-living pones on Dartmoor and the New Forest need only be listed in the Commoners and Verderers registers with no requirement for inspection to a breed standard, entry into a stud-book, proof of parentage or microchipping, whilst on Exmoor the terms of the derogation that was available have been set impossibly high.

Regulation 18 of the Horse Passport Regulations sets out the Law whereby horses can be moved off the designated areas. Animals destined directly for slaughter must be accompanied by a passport application form, either with the sketch of the markings completed or identified by a microchip and be identified by a market sticker. They must then be slaughtered within 7 days of the date on the market sticker. Foals younger than 12 months old are exempt from this. Strictly speaking, the requirement to have a completed passport application for each animal over a year old means that an authorised person must complete the paperwork for each individual. Discussions with Devon and Somerset Trading Standards Department and with DEFRA have confirmed to this report that the relevant authorities are prepared to take no action in respect of this requirement if gathered ponies go straight from Exmoor to slaughter in a collaborative effort to clear the moor. Stephen Potter has confirmed that he is prepared to take ponies and horses from Exmoor on the basis of a list and individual identification by market sticker, but that he cannot take large numbers all at one time.

6.4. The Exmoor Pony breed – a unique zoological treasure?

6.4.1. A brief documentary history

Ponies or horses have been allowed to breed and roam freely across the moorlands and commons of North Somerset and North Devon for several hundred years. The history of the moorland horses is reviewed in a rather piecemeal manner by the standard historical texts[7, 22, 32]. There are records of "horses" and "widgebeasts" on Exmoor dating from the Doomesday Book, in which one hundred and four horses were recorded for Brendon Manor. There is then no recorded information until the late sixteenth century when Snell[32] reports a dispute between moorland graziers that mentions "rother beasts, horse beasts,

sheep, swine…". MacDermot[22] tells us that in the early seventeenth century widgebeasts or horsebeasts were supposed to be rounded up (drifted) off the moor five times annually by the free-suitors, although he doubts that this occurred. He also quotes a legal dispute dated to 1617 that mentions "great numbers of cattle, sheep and horsebeasts" on Exmoor.

The Royal Estate was sold after the execution of Charles I and passed into private ownership until the Restoration, when it was returned to the Crown, with the former 'owners' as leasees or Wardens. In the 1660s, after the restoration, James Boevey purchased the life lease of the Forest and charged for summer grazing at the rate of 4d per head for sheep and 2/- for cattle. He charged 4/- per head for horses, which could be pastured on the moor all year round, but were clearly in private ownership and subject to identification and gathering[7].

MacDermot[22] gives details of legal documents relating to a "mare colt" that was the subject of a confusion of ownership after the horse had been drifted off the moor in 1673. Evidently John Harton claimed the colt (the term was used for young males and females) on the basis that he recognised the horse by its "age, colour and ear mark". This is the first reference to colour in the records of the Exmoor horses; it is non-specific but appears to indicate that this animal was distinctive in colour and that all Exmoor horses were not exactly the same colour in 1673.

Records appear to show that the herd of Exmoor horses was relatively small at the beginning of the eighteenth century, since Burton[7] and MacDermot[22] show that fewer than 20 animals were sold each year off the moor between 1700 and 1736 when 34 were sold.

No details are given anywhere of the size of the horses / ponies sold from Exmoor until the late eighteenth century when Collinson and Billingsley, both quoted by Baker[3] refer to the "small horses" of Exmoor and to the "small breed of horses and cattle" on the moor. There is, however, no reference to colour or type. By 1771, according to MacDermot[22] the Forester's herd of horses, as recorded in the Forest Account Books numbered some 422 animals, almost equally divided between males and females. Thirty- six "Exmore Naggs" were sold in 1777, forty-seven in 1780, thirty-five in 1783 and twenty in 1785. The sales records show that these animals were auctioned for an average of £2.3 each – a significant sum and an indicator that the horses must have been purchased for a working or riding purpose.

The Forest Accounts of the early nineteenth century provide the first reliable record of the colour of the 'Exmore Horses' horses sold after the round-ups. Eighty-one animals were sold in the years between 1805 and 1809, by which time they were fetching an average of £10.75, with the most expensive selling for £12. Of these eighty-one animals, thirty-three were black, nineteen were grey, seventeen were bay, nine were dun, two were 'chasnut' and one was piebald. Although Baker[3] and Burton[7] speculate that horses of these colours were sold because the Warden was "culling his herd to rid it of non-Exmoor animals", there is no evidence for this whatsoever and no earlier evidence of the colour of the 'Exmoor Pony', which was, in fact, consistently called a horse until much later in the nineteenth century. It is important to note that the variety of colours described between 1805 and 1809 pre-dates the sale of the Crown Estate to the Knight family in 1818, at which time there were several hundred horses or ponies on the moor. Sir Thomas Acland took the majority to Winsford Hill, but left a herd for John Knight who later introduced Arabian, Thoroughbred, Cleveland Bay and other pony stallions to produce cross-breds in an effort to 'improve' the stock[17, 29]. Other horses or ponies were allocated to the local farmers (the 'Free Suitors and Suitors at Large); there is no record that the division of the moorland herd between these three parties was based upon type or colour. The 1805-1809 record is therefore very important since it can only be

interpreted in two ways: either there were always bays, chestnuts, greys, piebalds and blacks amongst the free living Exmoor ponies, or non-Exmoor equine stock had been introduced into the free-living Exmoor ponies in the eighteenth century and had bred freely with the native ponies. The presence of chestnuts is especially noteworthy, since this colour is recessive to all others and indicates that both sire and dam must have been chestnut; the chestnut ponies sold off the moor in 1805 cannot have been first generation crosses and at least one chestnut stallion must have been breeding on the moor at that time.

Writing in 1831 William Youatt[47] describes the Exmoor Pony as 'hardy and useful' and interestingly describes the Dartmoor Pony as a 'race of ponies, sure footed and hardy' and 'if possible, uglier' than the Exmoor. He states that it is the Dartmoor, not the Exmoor that 'exists almost in a state of nature' and describes an unsuccessful attempt to capture one of these 'wild' Dartmoor stallions by Captain Colgrave, the governor of the prison. Youatt also gives a full account of 'pony hunting' in Wales, a sport that involved the pursuit of the 'wild' ponies in the hills with horses and hounds. He describes a fatal accident in which one Hugo Garonwy pursued a wild pony stallion with his hounds and mounted followers and eventually lassoed the stallion, cornered and apparently exhausted. The wild pony stallion, in fact far from exhausted, pulled Garnonwy from his horse and together they plunged to their death over a precipice. It is clear that 'wild' (feral) ponies were present on Dartmoor and the Welsh hills as well as on Exmoor in the early nineteenth century, and were evidently present in several other marginal and upland areas of Great Britain.

The Illustrated London News of October 22nd 1853 describes in detail an eye-witness account of the sale of Exmoor horses and ponies after the round up into the pound at Withypool. The article is illustrated by two engravings, one is entitled 'pony catching on Exmoor' and the other 'leading away ponies from Exmoor'. The engravings clearly show grey ponies and white socks on dark ponies.

Figure 10. Illustrated London News. 1853. Exmoor ponies at the gathering; note the white socks

The long and detailed article describes the way in which the animals were penned and notes that buyers came from afar afield as Lincolnshire and Northamptonshire. The ponies ranging freely on the moor at this time and gathered for this sale were 'the result of crosses made years ago with Arab and Thoroughbred stallions on the indigenous race of Exmoors'. The correspondent notes that the 'real Exmoor pony seldom exceeds twelve hands in height and has a well shaped head, very small ears and a thick round shoulder peculiar to all breeds of wild horses… indeed the whole body is compact, round and well ribbed'. In the 1853 sale at Withypool the prevailing colours were bay, brown and grey; chestnuts and blacks were less frequent and not in favour with the country people. The first pony in the illustration was 'one of a beautiful pair of browns, with mealy noses, purchased for the Countess of Carnarvon', suggesting that the modern Exmoor Pony type was present then, although it was clearly not ubiquitous, since another of the 'Exmoor breed' was a little chestnut stallion, twelve hands or four feet in height that jumped at a standing jump over a five foot pound fence and escaped back to the moor. Both his parents must have been chestnuts. The illustrated pony with the mealy nose purchased for the Countess has a bright white sock.

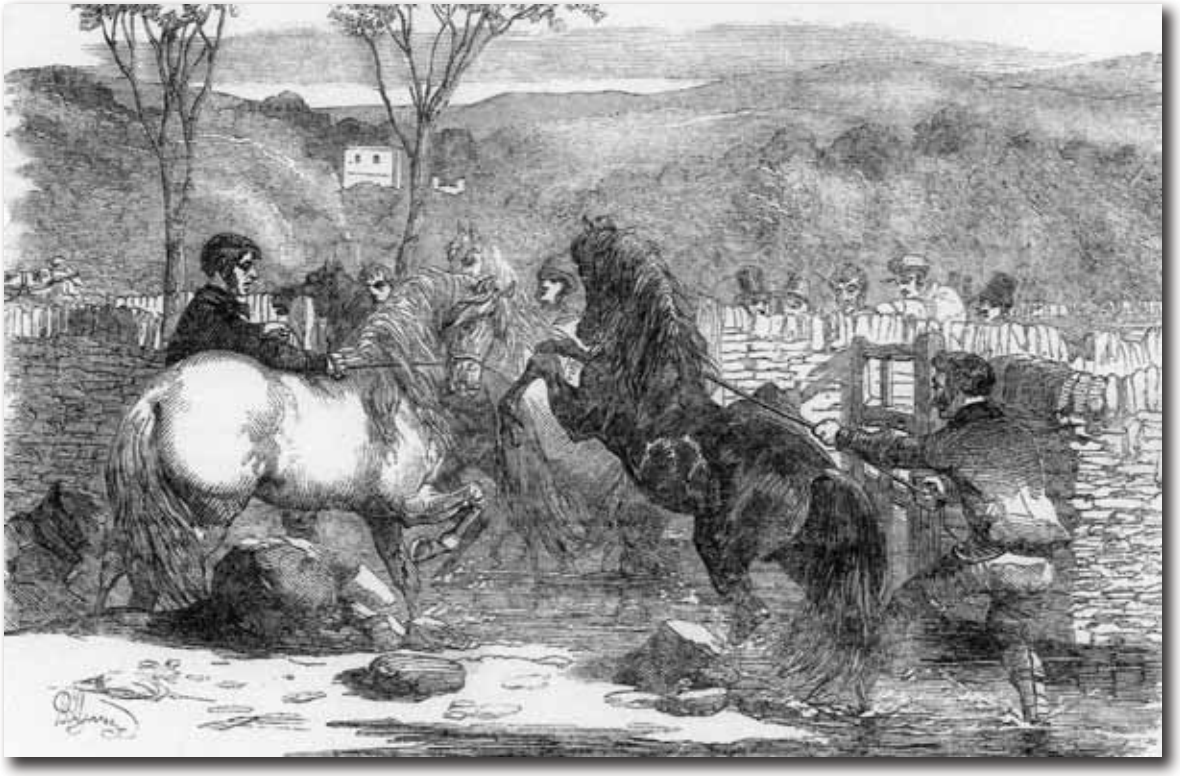


Figure 11.Illustrated London News 1853. Exmoor ponies at the gathering: grey and black.

This article was written in 1853 and refers to the introduction of Arab and Thoroughbred blood to Exmoor 'years ago'. John Knight had first imported black Dongola Arab mares in 1826[29] and later put the Thoroughbred stallions Padarus, Canopus and Old Port to the Exmoor pony mares and introduced other pony types[3]. It is therefore likely that the bays, browns, greys, chestnuts and blacks sold at Withypool in 1831 were a reflection of John Knights experiments, but there is no indication that the original Exmoor Ponies were all of one colour, nor that they were in any way segregated from the cross-breds on the moor.

Wortley Axe[45], writing in 1906, has a short chapter on the Exmoor Pony. He deals with the story of the introduced stallion Katerfelto, which he concludes did indeed exist and was 'a dun horse with a black list down his back' in appearance 'a blood-like cob'. Exmoor ponies, he states have 'existed for a period far beyond living memory' and then reviews the influence of John Knight and Frederick Knight in their introduction of Arabian

and Thoroughbred blood. Wortley Axe refers to the strain of ponies bred by the 'late Sir Thomas Acland' at Porloch near Dulverton, 'to which place their ancestors were removed when Sir John Knight purchased Simonsbath'. He goes on to say that 'it is believed that shortly before his decease Sir Thomas Acland introduced some crosses and so followed the example of Sir John Knight'. In describing the characteristic features of the Exmoor, Wortley Axe tells us that the Exmoor shows more quality than the Dartmoor, but no-where suggests that they should be a uniform colour. He ends by saying 'anyone who purposes embarking in the pleasurable pursuit of pony breeding should congratulate himself if he succeeds in getting a few mares of the old blood, for they are sure to serve him well, but as has been stated above, the majority of so-called Exmoors are simply mongrels'.

Gilbey[17] describes in detail the ponies of the uplands of England in the nineteenth century and traces the history known at that time. According to him, free-living ponies had lived 'wild' on the hills of Cumberland, Northumberland and Wales, as well as the moors of the West Country for centuries. He quotes a description from 1860, in which a visitor to Devon remarked that 'the original colour of the Exmoor seems to have been buffy bay, with a mealy nose' and goes on to recount the local opinion of the origin of the Exmoor pony by saying that 'it is supposed to have preserved its character since the Phoenicians brought it over when they visited the shores of Cornwall to trade in tin and metals'. This suggests that the Exmoor ponies derived from Cornish stock and raises the issue of whether the ponies of the West Country moors have all been connected and related at some time. Gilbey makes the point that by the late nineteenth century the 'Exmoor and Dartmoor' were considered at some shows to be a single, interrelated breed. At Newton Abbot Agricultural Show, for instance, in 1875 the ponies from the moors were shown as one class and the report in The Field for May 29th of that year states that 'It must be observed that the word 'moor' should apply to Exmoor and the Bodmin wastes as well as the Forest of Dartmoor…The moor pony or galloway of 14 hands is often in reality a little horse.'

Gilbey[17] states that 'it is certain that ponies have run in these districts (Exmoor and Dartmoor) for many centuries in a practically wild state, and have probably always supplied the tillers of the soil with beasts of burden. In times when these localities were without roads of any kind and wheeled traffic was impossible, the sled and the pack-horse were used for transporting agricultural produce. The sleds were drawn by oxen and small horses; and ponies were employed to carry corn etc. in pots and panniers, the ponies used for this purpose being the animals which ran at large upon the wastes'. According to Gilbey, as late as 1860 horses were taken off both Exmoor and Dartmoor and broken to use as packhorses, describing these animals as 'the larger ponies of the Exmoor and Dartmoor breeds'

By 1900, when Gilbey[17] was writing, he believed that the only 'pure Exmoors' still existing at that time were those in the Acland herd, although he gives no detailed description of them. At that time, however, the Polo Pony Society stud-book (Volume 5) does provide a description of the Exmoor, furnished by the Local Committee of the Society:

> The Exmoor pony should average 12 hands and never be above 13 hands; moorland bred; generally dark bay or brown with black points, wide forehead and nostril; mealy nose; sharp ears; good shoulders and back; short legs with good bone and fair action. There are a few grey ponies in Sir Thomas Acland's herd, but no chestnuts.

The ponies on the estate purchased by the Knight family were subject to considerable out-crossing by the introduction of other stallions and mares in an attempt to increase their size. According to Gilbey[17] the Knights and their agent Robert Smith brought in two Arabian stallions and three mares, then the Thoroughbreds Pandarus and Canopus, then

pony stallions including a grey of 'nearly pure Acland strain' called Lillias, then a bay halfbred Arabian called 'Bobby'. In 1898 a reliable informant described the Exmoor ponies to Gilbey and made it clear that the 'Knights' were larger than the 'Aclands', but there is no reference to colour. Baker[3] reproduces photographs dated to 1900 of the Acland herd and of the pony sales at Bampton, both of which clearly show grey ponies within the groups of Exmoor Pony. According to Gilbey[17] the other farmers and landowners who took ponies after the sale of the Crown Estate in 1818 also crossed them with other horses and ponies. He singles out for special mention of their pony studs Nicholas Snow of Oare, The Earl of Carnarvon at Pixton Park and Viscount Ebrington (later Earl Fortescue), who purchased the estate from the Knight family in 1879 and had a pony stud at Simonsbath.

There is no doubt that the Knight ponies were subject to considerable efforts to 'improve' them and that the small herd purchased with the estate by the Fortescue family were cross breds and of very mixed ancestry. The 'purity' of the Acland herd is therefore cited as the principal conduit by which pure Exmoor ponies have been preserved[3]. This is, however, difficult to substantiate from existing records and archives. Of the standard texts setting out the history of Exmoor, the Royal Forest and the Crown Estate, only Burton[7] appears to have sought out the archives of the Acland family and studied in detail the Forest Books from 1714, when Robert Siderfin was Forest Warden, through to the wardenship of Sir Thomas Acland, who purchased the leases of the Forest from the third Earl of Orford in 1767.

Burton[7] reveals an important fact: that the moor and Forest were cleared of all ponies except the agisted ponies when the herds belonging to the Hill and Darch family were sold at the termination of their leases as joint wardens in 1748. Some 450 ponies were sold in the final three years of the Darch / Hill wardenship and none were sold or cut (castrated) from the moor for 15 years until Sir Thomas Acland I had purchased the lease. He then purchased and turned out onto the moor a 'new' herd of ponies, which by 1772 had grown sufficiently to warrant the revival of both the traditional gathering and sale, when the another old custom, that of 'crying the survey of the colts' was also restored. In 1773 36 nags and colts were sold and the gatherings and sales then became annual events. It was this herd that soon gave rise to the sales records of 1805 -1809 referred to earlier in this section, when greys, chestnuts, blacks, bays, duns and a piebald were sold at the annual gatherings. When Sir Thomas Acland III was thwarted in his efforts to purchase the Crown Estate on Exmoor only ten years later and was outbid by John Knight (and indeed by Lord Fortescue), he was allocated an allotment of 3,298 acres, which he promptly sold to John Knight. The allotment of 1880 acres allotted to Sir Charles Warwick Bamfylde was purchased by John Knight and the manors and commons of Brendon and Badgworthy were bought from the Chichesters at Youlston[7]. Knight then owned almost the entire moor upon which free-living, 'wild' Exmoor ponies could have roamed. None of his estate was left as wilderness or in desolation, since his overwhelming motivation was to 'improve' his lands and bring them all into productive cultivation or grazing. There is no record of wild, unimproved or ungathered ponies persisting on the Knight estate.

Sir Thomas Acland took only about 20 ponies to Ashway, which included four stallions[23, 32], but there is no record of their colour or type. These animals are said to be central foundation stock from which the modern Exmoor pony has been derived[23]. Baker[3] quotes Evelyn March-Phillips[23] describing the gathering of Acland ponies in 1896. She notes that 'a stong well shaped black has failed to acquire the indispensable mealy nose and not withstanding undeniable merits, the fact goes forth that he is to run no more with the herd'. This clear evidence that the Exmoor pony 'type' was at that time being artificially selected and also that this animal was rejected because he lacked the mealy muzzle, not because he was black, a colour accepted by the founders of the Exmoor Pony Society in 1921, along with greys. Both colours are now forbidden by the Society.

Although Baker[3] and Gilbey[17] state that other Exmoor farmers purchased and bred pure Exmoor ponies at the time of the sale of the Crown Estate in 1818, there appears to be no record of these other than the studs belonging to the Snows, the Fortescues and to Pixton Park[7]. The provenances of the herds associated with the Wescotts, the Thornes, the Crockfords and the Prings can all, according to Baker[3], be traced back to the Acland herd. Only the Milton herd is said to be derived from ponies purchased at the dispersal sale of 1818; this is the belief of the current herd 23 owners and there may be evidence for this in the family archives.

This brief review of the historical archive confirms several irrefutable facts. 'Wild' or feral ponies were present in many marginal, upland or 'wasteland' areas of Great Britain during the eighteenth and nineteenth centuries and almost certainly long before that. There is no record before 1805 of the colour of Exmoor ponies, although in 1673 at least one animal could be identified by its colour. The moor was cleared of free-living ponies for some 15 years in the late eighteenth century other than the agisted horses for which grazing was purchased from the wardens. Sir Thomas Acland established a new herd of ponies in 1767 and turned them out onto the moor. The presence of bays, greys, chestnuts, blacks and a piebald in this new herd at the beginning of the nineteenth century can only mean either that mixed-colour blood had been breeding on the moor for some time before that, or that that Exmoor ponies had always manifested these colours. Introductions of new, non-Exmoor blood were made to the moorland herds on the Knight estate in the nineteenth century. By the late nineteenth century most ponies considered as 'pure Exmoors' were bay or brown or grey and the 'mealey muzzle' had become accepted as a fundamental breed characteristic. At that time ponies were artificially selected for these characteristics and those not conforming to this breed type were rejected. Greys and blacks were accepted by the founding members of the EPS.

It may be argued that this archival history provides documentation only of the 'owned' or 'semi-domesticated' ponies, which were regularly gathered and that there were herds or groups of truly wild 'British Hill ponies' surviving in pockets on Exmoor in the eighteenth and nineteenth centuries. If this were the case, they certainly have not existed in the 20th century and if they were incorporated into the Acland, Knight or other herds there will be genetic evidence of this when contemporary genetic techniques are applied to Exmoor ponies. There is no record of such ponies in the archive material. The genetic aspects will be considered at 6.4.2., below.

In 1921 a small group of local farmers and pony enthusiasts became very concerned that numbers of Exmoor Ponies were becoming severely reduced and met in Dulverton to establish The Exmoor Pony Society. The breed 'type' or standard was therefore settled by discussion between founder members of the Society in the early twentieth century. They fixed the optimum and indeed the maximum size for the pony and agreed upon colour, markings and other features of the breed. These breed standards have been modified since then, especially in respect of colour. They were set at a time when it was fashionable to define the regional pony breeds into set types: Victorian Caledonian enthusiasm had seen the formation of the Shetland Pony Society in 1890, the Welsh Pony and Cob Society had been formed in 1901, the Fell Pony Society was formed in 1922 and the Highland Pony in 1923.

6.4.2. The genetic evidence for the Exmoor Pony as a direct descendent of the prehistoric wild pony

There is a very widespread belief that the Exmoor pony is directly descended from wild ponies that roamed the uplands of Britain before humans colonised the landscape after the last Ice Age. The very ancient, indeed prehistoric character of the Exmoor pony breed is extensively used to promote the pony and to promote Exmoor itself. Visitors and

enquirers are confidently told that the Exmoor pony is uniquely precious, in terms of equine domestication and survival; that it represents the only pure remnant of the 'British Hill Pony', which co-existed on the cold tundra of Europe with the mammoth, the reindeer and the woolley rhinoceros.

Such information is typified by the introduction to an article on gathering Exmoor ponies in the Autumn 2013 edition of EXMOOR Country Magazine:

> "Ponies have foraged on Exmoor, adapting to its ever-changing, harsh climate since the last Ice Age thaw around 10,000 years ago and, it is believed, they pre-dated human inhabitants. When humans did come, they brought change. Initially the ponies were hunted for food. Later they were captured and became beasts of burden, working the land as well being ridden by men…"

Further detail of this received Exmoor pony history is given in 'Everything Exmoor' on line - 'THE EXMOOR ENCYCLOPAEDIA' (accessed in September 2013)

> **"**Exmoor National Park is home to the very special Exmoor ponies, who have remained pure blooded since the Ice Age and exist today in unique free-living herds in the moorland areas…..the ponies born today are very similar to those born thousands of years ago. They have not been mixed with other types of horses and ponies, so no other colours or shapes are possible. The ancestors of all our native pony breeds came overland from Alaska approximately 130,000 years ago and became widely distributed throughout what is now the British Isles. Dramatic changes in our climate some ten thousand years ago restricted the amount of open grazing available to mainly the mountain and moorland areas of Britain. The herds became isolated in these upland areas and the British hill pony developed as a result.
>
> Exmoor ponies…are a landrace rather than a breed of pony, and may be the closest breed remaining in Europe to wild horses….this… makes the Exmoor pony rarer than the Giant Panda and the breed is classified as critically endangered by the WWF-UK.
>
> Because their teeth are well adapted to a coarse diet, the ponies do not damage plants as readily as other breeds.
>
> The Exmoor Pony still runs free living on Exmoor and is, to most people's surprise, rarer than the Giant Panda! It is one of Britain's oldest breeds of pony and the nearest breed to the original wild horses of Europe. The Exmoor pony is the oldest and most primitive of the British native ponies, as well as the purest, and some herds still roam free in the moors of southwest England. The Exmoor is thought to be directly descended from the ponies that migrated from North America across the prehistoric land bridge . There has been very little crossbreeding, making the Exmoor the purest of the native pony breeds. The earliest crossing was with Celtic ponies, who bred with the native ponies of the region in 1000 BC. Some farmers tried crossing the pony with other breeds, but the offspring were not hardy enough to survive the harsh moor, and these herds died out early this century. Characteristics include toad eyes, good bone, a weatherproof coat and a snow chute on the tail. These primitive features suggest very little change since the Old Stone Age. Caves in the nearby Mendip Hills have revealed horse bones identical to modern Exmoor ponies from 12,000 years b.p. While in every other part of Britain other equine blood was introduced to a degree which drastically altered the appearance of the British Hill pony, on Exmoor this did not happen. Most of the changes to ponies elsewhere in Britain took place in the last few hundred years and can be linked to the influences of major trade routes and ports introducing new ideas and new animals or to the influences of landowners doing the same. Exmoor, until very recently, was a forgotten place with no such routes across it or large ports nearby; few landowners feature in its history. It was in

effect a social island within the British Isles and because of this the original type of pony survived.

A few people on Exmoor followed the trend for crossing and "improving" the local pony but it is significant that their herds died out and they leave no legacy. The Exmoor ponies of today are descended from stock which was managed on the principle that nature had the best design and introducing other blood led to dilution of hardiness. The Exmoor pony is a very rare animal. At the last census in the mid 80's there were just under 800 ponies in total; it is thought that the population has risen to around 1200 since then. This still makes them a tiny part of the British fauna; there are twice as many wildcats in Scotland as Exmoor ponies anywhere, over 5 times as many otters in Britain as Exmoors."

Figure 12. Are Exmoor ponies uniquely descended from prehistoric horses?

Apart from the fact that both the giant panda and the otter are *species* and the Exmoor pony is simply a *breed* within a worldwide species numbering many millions, and accepting that such beliefs are attractive and to some degree romantic, the evidence for these claims must be scrutinised. Exmoor ponies have become a fundamental part of the 'Exmoor experience' for the tourists and visitors to the area; enquiries at the Exmoor Visitor Centre at Dulverton have confirmed that the two creatures that tourists would most like to see on the moor are the Exmoor ponies and the red deer. The Exmoor Pony Society promotes the breed as 'Britain's oldest breed of native pony, thought to be little different from the original wild ponies that colonised Britain many thousands of years ago'. The National Park Authority and the Moorland Mousie Trust rely heavily upon the promotion of the breed in this way, indeed this project has arisen partly because of the

concern for the survival of the free-living Exmoor ponies as pure-bred descendants of an ancient race.

The documentary evidence reviewed above (6.4.1.) gives no support to the hypothesis that the Exmoor pony in previous centuries was any different from the regional and sometimes feral ponies that were kept on other areas of marginal and upland pasture, heath and moorland in Britain, but it does not provide conclusive proof that the Exmoor pony is not in some way special.

Before the second half of the twentieth century, attempts to establish phylogenetic relationships between animals were largely based upon comparative anatomy. Such comparisons of horse bones gave rise to the early theories that Exmoor ponies might be related to the ponies whose fossil bones are commonly discovered in Pleistocene archeological sites in Britain. This work is well documented by Baker[3], especially referring to the efforts of James Speed, a veterinary anatomist, to establish that Exmoors were similar if not identical to prehistoric horses on the basis of their bones. Unfortunately, such work is of no value for the genus *Equus*, since the plasticity of the equine skeleton means that morphological variations occur both within and between species, even over extended time periods[36, 43]. It is almost impossible to distinguish one equine species from another or one breed from another by reference to their bones, either in the fossil record or in modern species. Because of this, recent evaluations of the classification of fossilised and prehistoric horse bones have suggested that the separation of extinct equid species based upon bone or dental morphology is meaningless and that any variations in anatomy can be explained completely in terms of sexual dimorphism (the differences between males and females) age and regional development[36, 43]. All the separate Eurasian equine species of the Pleistocene period should be considered as *Equus ferus*, the original wild horse that colonised Eurasia from the Bering land bridge. This species is now extinct[1, 4, 9, 18, 33, 34, 37.], although a never-domesticated subspecies of *Equus ferus, Equus ferus przewalkskii* survived in the Gobi desert[1, 20].

Another variant of comparative anatomy is likely to have influenced the belief that the Exmoor pony is directly descended from the ancient prehistoric wild horse *Equus ferus*. The prehistoric cave paintings of Spain and France first came to public attention in the first half of the 20th century. Wild horses with brown coats, erect manes, beards, dorsal stripes and mealey mouths feature large in these Paleolithic art works. Exmoor pony enthusiasts have seized upon the similarities between the early 20th century dun/bay Exmoor and the images from the cave walls and suggested that the similarities are more than simple co-incidence[3]. The dun-coloured, black-pointed phenotype was undoubtedly the phenotype of the pre-domesticated wild horse[21], but such colouring is found widely in modern pony breeds worldwide and Exmoor pony breeders have not been alone in noticing the similarities with their breed and the cave art. Identical claims, that the individual breed is descended from these ancient, cave-art horses are made by Russian pony breeders and for at least two native French pony breeds[6, 8, 18].

Figure 13. Several European and Russian breeds claim direct descent from prehistoric horses.

Certain unusual features of the Exmoor pony skull and dentition have been cited as evidence of ancientness, with some sources claiming that Exmoors have an extra set of molars (eg Wikipedia. Exmoor Pony. September 2013). This is simply not the case: Exmoor skull anatomy and dentition are no different from that of other native breeds and it is impossible to distinguish between them by reference to cranial anatomy[36, 43].

Contemporary molecular studies, however, are rapidly revealing phyologentic and ancestral relationships in a wide variety of species, from humans to horses and there is now increasing ability to answer questions about the origins and provenance of our domestic animals. Basic genetic testing for parentage has been available since the early 1960s, based upon blood groups and biochemistry, but it was not until 1997 that the first DNA based parentage testing panel was described[30].The equine genome was fully sequenced for the first time in 2009[38].

The use of bones as indicators of relationship within horse species on the basis of comparable anatomical features has now been acknowledged to be fruitless, but bones have much more recently proved valuable because it has been possible to extract DNA from them. There are also a few mummified, permafrost-preserved *Equus ferus* specimens with soft tissues from which DNA can be obtained[6]. The mitochondrial DNA (mtDNA) of all vertebrates is passed exclusively through the female, which enables researchers to distinguish maternal haplotypes or matrilines. Studies have now compared the mtDNA of *Equus ferus* with that of contemporary breeds, including the Exmoor pony[1, 9, 20, 37]. These studies have shown that there was considerable genetic variation in the pre-domesticated Eurasian horse, which is consistent with a widely distributed wild population. Although these animals co-existed with early humans in Europe, there is no evidence that they were ever domesticated here[1,4]. They were used as a food source by hunter-gatherers, along with other Pleistocene mammals. Analysis of *Equus ferus* mtDNA has revealed some 87 haplotypes. Thirty-nine of these (30%) have persisted into modern horse breeds world wide, showing that *Equus ferus* was indeed the ancestor of all domesticated horses[9, 20, 43]. Recent work has shown that different regions of Eurasia have horse and pony breeds that can be characterised genetically by more than one different criterion: the degree of heterozygosity in the breed (how wide is the genetic variation within the breed), the allelic frequencies and what proportion of *Equus ferus* matrilinear mtDNA is still present in the breed. These factors can independently inform the debate about the origin of horse domestication and the relative antiquity of the various Eurasian breeds.

The analysis of nuclear heterozygosity within European breeds considered to be ancient shows that there are two regions where a considerable breadth of genetic variation remains within the local native breeds. These areas are the western Eurasian steppes and the Iberian Peninsula[41]. In the remainder of Europe the analysis of nuclear DNA reveals very low levels of genetic variability, and mtDNA studies reveal a very restricted mtDNA profile, which is remarkably consistent across several northern and western pony breeds, including the Exmoor[1,9]. The Exmoor and Welsh ponies retain only 2 of the 39 pre-domesticated haplotypes, the Icelandic and Shetland 4 and the Norwegian Fjord pony 5. As a comparison, the genetic richness of the Middle Eastern breeds appears to have been far less depressed by inbreeding, since the Akhal Teke retains 13 and the Arabian 18 of the haplotypes found in pre-domesticated wild horses[9]. Although interesting, such data does not necessarily inform ancientness, since anthropogenic breeding practices such as severe inbreeding and population contractions will also have had an effect.

The degree of heterozygosity and allelic richness within domesticated horses declines from east to west across Eurasia[40, 42], with the exception of a pocket of greater genetic diversity in Spain [41]. There are more maternal mtDNA haplotypes than would be expected if horses were only domesticated once, and it seems almost certain that the

knowledge of how to domesticate wild horses spread geographically, as well as through trade in or movement of already domesticated animals with migrating people[1, 19, 20, 38, 40]. The molecular evidence so far strongly suggests that the domesticated horses of north west Europe originated from the steppes of modern day Ukraine and northwest Kazakhstan, but that further tamings of wild horse mares occurred as horsemanship spread west across Europe. This genetic evidence corresponds precisely with the archaeological evidence[4, 18, 33].

All accepted contemporary archaeozoological evidence indicates that *Equus ferus* became extinct in England in the boreal period of the Holocene epoch. There is no archeological evidence of wild horses in England after this time (8600-7100 BC), although *E. ferus* persisted elsewhere in Europe for some while[18, 19, 33]. There appear to have been two persistent refugia of *Equus ferus* into the late Holocene: the Eurasian steppes and the Iberian Penninsula[41]. Although domestication occurred principally in eastern Europe / western Asia, the possibility that some later introduction of wild mares into domestic stock in Spain cannot be ruled out[1]. It is certain, however, that no domestication occurred in Britain, by then cut off from Europe and devoid of wild horses[1, 4, 33]. If Exmoor ponies included blood from survivors of a pocket of wild horses that persisted on Exmoor through the Holocene period, there would be a degree of maternal haplotype variety and of allelic richness unparalleled elsewhere in Europe. This is simply not the case. Exmoor ponies are no different in their genetic richness than other native breeds of Britain, Iceland and Scandinavia[1, 8, 19].

The restricted genetic material in Exmoor ponies cannot be explained by the bottleneck of the population that occurred in the mid twentieth century for two reasons: first, the genetic analysis of Viking horses shows that the relative allelic poverty and genetic depression of inbreeding that characterises the Exmoor and other modern native ponies was already present before the Norman conquest[37]. Secondly, in the geographical regions of the world where genetic diversity is much more rich, there are pony breeds that have suffered population crashes to fewer than 20 individuals yet still retain much greater breadth of DNA variability than the Exmoor pony does[40].

Turning to the patrilinear genetic evidence, recent work has concentrated on the Y chromosome, possessed only by males. The vast majority of domesticated horses worldwide have but one single Y chromosome haplotype in the nucleus[39], although a second haplotype has recently been described in Chinese horse populations[46]. This strongly suggests that the domestication of horses involved only a small pool of stallions[19 39], in contrast to the wider incorporation of wild mares into the domesticated population. If Exmoor had in any sense served as a refuge of the pre-domestic wild hill pony there would likely be greater variety of Y chromosome character in the Exmoor breed. This is not the case; Exmoors share the same Y chromosome haplotype as all domesticated horses in Europe.

The hypothesis that remote, upland Exmoor offered a refuge to persistent populations of prehistoric horses is further undermined by reference to local archaeology. The two Eurasian areas where *Equus ferus* appears to have survived well into the boreal period of the Holocene are both regions where reforestation after the Ice Age was incomplete. Both the western European steppes and the Iberian Peninsula did not become densely forested at this time, providing a suitable habitat for the horse that required an open grassland or tundra habitat[33, 41]. In contrast to this, the evidence of vegetation ground cover for Exmoor at this time is of the majority being covered by oak and ash woodland, with the very highest parts forested with birch. There may have been a few wet heathland patches, but insufficient to support wild horses[15, 18,44]. There is no archeological evidence of post-Pleistocene wild horses on Exmoor, indeed no archeological evidence that domestication of horses occurred anywhere in northern Europe, including Britain[1, 4, 18].

All the genetic and archeological evidence is therefore consistent with the prehistoric wild horse *Equus ferus* becoming extinct across northern Europe and Britain. Domesticated horses were introduced to Britain in the Bronze Age and have been anthropogenically selected ever since. Regional breeds developed from common domestic ancestors and all the native pony breeds of the UK are similar in their antiquity. The Exmoor pony is a regional native breed, but it is not an archaeological or zoological treasure.

6.4.3. The true status of the Exmoor Pony

In April 2013 the UK Farm Animal Genetic Resources Committee of DEFRA published a report[14] into the value, conservation and status of the breeds of domestic livestock native to the UK. The forward to the report gives the background:

> 'The UK has one of the richest native Farm Animal Genetic Resources (FAnGR) populations in the world. This report identifies 235 UK native breeds of farm livestock. Over 75% of these are at risk of extinction, as a result of small breeding population size, geographical concentration, or both.
>
> It is vital that our FAnGR – including breeds at risk, and those not at risk, and the genetic variation within them – are conserved and used sustainably. They are an important component of wider biodiversity which intrinsically deserves protection. Also, having diverse FAnGR will help us to respond to new challenges, such as feeding a dramatically growing global human population and potentially developing our FAnGR to adapt to climate change. Our FAnGR are of great economic importance, being the foundation for livestock products in the UK's £72 billion food and drink industry. Many of our FAnGR, especially grazing animals, have a key role in managing the farmed environment and landscapes. They are of great social, cultural, and heritage importance. Finally, we have formal commitments to manage these resources – at domestic, European, and wider international levels.'

Horse and pony breeds have been included in the FAnGR lists and appendices for some time. The Exmoor pony is considered as a native breed at risk under the terms defined within the report and this status is the basis for the inclusion on the Native Breeds At Risk list in the HLS supplement (see 6.3.3, above). The definitions used within the report are helpful to an understanding of the value of the native breeds:

> A livestock breed, in the UK context, is an interbreeding population of husbanded or formerly husbanded domesticated animals of consistent genotype and phenotype with a recognised history and administrative framework.
>
> The population fulfils, or potentially fulfils, a role in the rural economy. This condition may be satisfied by evidence that the breed has been, at some time in the past, viable in numbers that exceed criteria for being at risk by UN FAO standards.
>
> Less than 10% of the aggregate genetic contributions to the population over the last 4 generations are derived from other resources distinct from foreign herd books recognised as representing the same breed.

A 'native breed' is further defined:

> The breed satisfies the criteria for inclusion in the UK National Breed Inventory described above.
>
> Breed history documents the breed origin within the UK (including from an amalgamation of native breeds) and the UK has formed the primary environment for the

development of the breed.

Breed history documents its presence in the UK in its current adapted form for a qualifying period of at least 40 years or 6 generations whichever is the longer period of time.

Less than 10% of the aggregate genetic contributions to the population over the qualifying period are derived from other resources distinct from foreign herd books recognised as representing the same breed.

A minimum of 80% of the genetic contributions from any generation of ancestors within the qualifying period must come from ancestors that were (i) registered in the breed's herd book and (ii) born in the UK. An exception to this may be granted as part of an approved conservation scheme.

The Exmoor pony fulfills these criteria: the UK has been the primary home of the population, it has been present in its current adapted form for at least 40 years and for 6 generations and there have been few if any introductions of non Exmoor blood for that qualifying period.

The report makes it clear that the value of the native breeds lies in the genetic resources of the breed. Although the Exmoor pony may be no more ancient than the other native breeds, it is nonetheless distinct. Mainstream commercial breeds of livestock tend to be based upon a mixed pool of genetic material recently selected for intensive production. The native breeds retain genetic material that may be valuable in the future when agricultural practices or environmental constraints make the mainstream breeds less suitable. Although horses are not food-producing animals in the UK, the native breeds conserve genetic variety lost from modern, performance-based cross-breeds and novel breeds. This is the value of the Exmoor, the Dales, the Fell the Shetland and the other recognised native breeds of the UK. As the FAnGr report makes clear: it is essential to preserve it.

Figure 14. The Exmoor pony is a valuable, rare native pony breed

6.4.4 The Exmoor pony stud-book

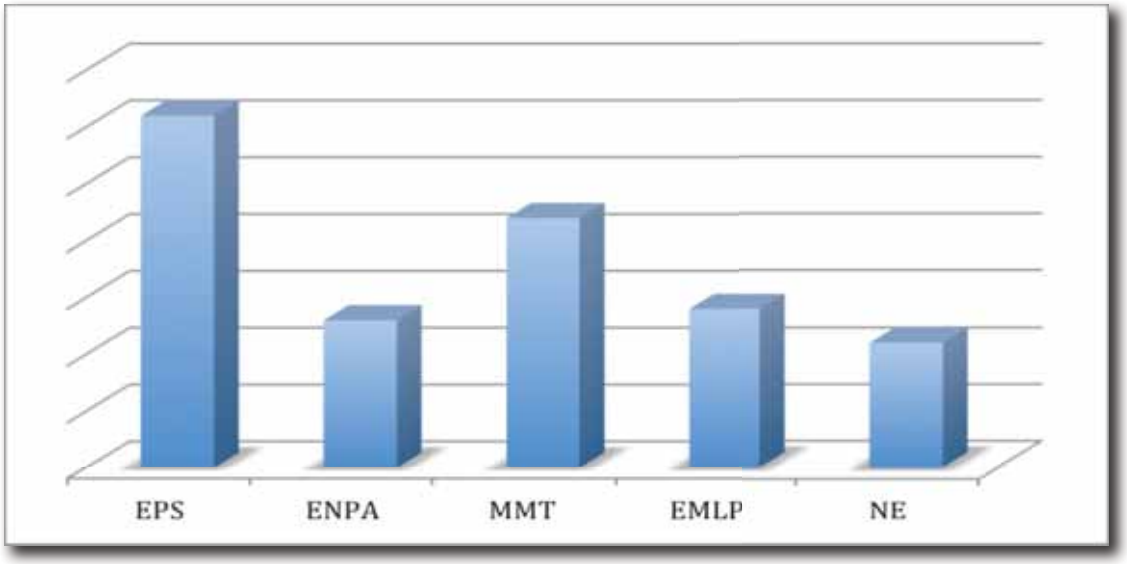
The stud-book is maintained by the Society using software provided by Grassroots Systems Ltd. All data recording the parentage, date of birth, microchip number and description of the ponies is entered by the Secretary of the Society, who is reliant upon information supplied by the breeders and information returned by the laboratory in Newmarket that undertakes the DNA verification of proposed parentage. The problems with the current DNA testing scheme are discussed at 7.2.1. below, but even before the DNA scheme was introduced the Society recognised that there were difficulties with the original records of the true identity of the founders and the accuracy of some succeeding genertions. Many of the records that predated World War II were destroyed by fire in the war[12] and the relationship between Caractacus (1/9) and Crackshot (1/10) is uncertain[12]. It is therefore not surprising that according to Maroo[24] the pedigree completeness (PEC) of nine of the ten animals born 1942 is zero. There is a marked drop in the overall breed PEC in the years between 1933 and 1947. If three generations of pedigree completeness are taken into account the stud-book shows that the pedigree of animals born from 1962 onwards is 'nearly complete'. If five generations of pedigree are taken into account it not until 1982 that the pedigree of ponies born after that date can be taken as virtually complete and reliable[24].

This may appear to be disappointing, but such depth (or shallowness) of historic pedigree is not unusual for Rare Breeds in the UK, and the Exmoor pony completely fulfills the criteria for recognition as a true and pure breed[14]. The current requirement for upgrading horses into the main part of a stud book under the current Zootechnical Standards for horses requires only three generations of breeding true-to-type, although this is currently under review (Henson E L, pers. comm. and see 7.2.1, below).

7. THE OPINIONS AND CONCERNS OF THE HERD OWNERS OF FREE-LIVING EXMOOR PONIES

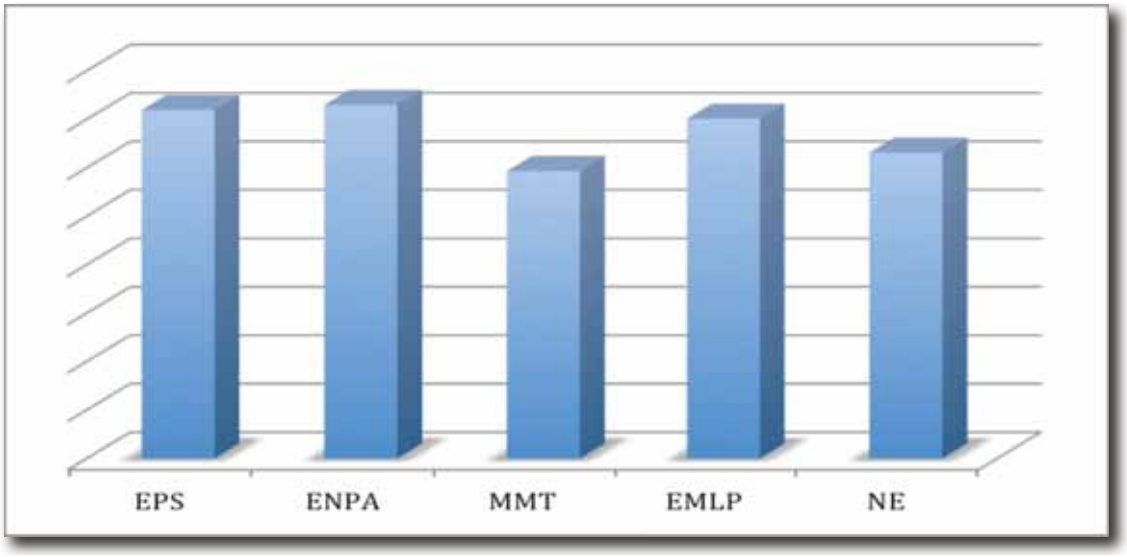
7.1.The perceived value of the bodies overseeing the free-living Exmoor ponies

Responses to the questionnaire constructed to canvas the opinion of the herd owners of the free-living Exmoor ponies for this project revealed a wide range of feelings towards the various organisations, authorities and lobby groups that affect the herds. Of the 20 herd owners listed by the steering committee, 18 were interviewed for the report. One no longer kept free-living ponies and one failed to respond to attempts to arrange an interview. As part of the interview and questionnaire, respondents were asked quantitatively to evaluate the input of various bodies to the current well-being and future security of the free-living herds. Each respondent provided a score for each body or organisation, where 0 equaled extremely unhelpful or obstructive and 10 equaled extremely helpful and encouraging. Respondents were assured that their scorings and opinions would be anonymous. Where no opinion was expressed a score of 5 (neutral) was recorded.



The relative helpfulness of the Exmoor Pony Society (EPS), the Exmoor National Park Authority (ENPA), the Moorland Mousie Trust (MMT) the Exmoor Moorland Landscape Partnership (EMLP) and Natural England (NE) to the current well-being and future security of the free-living Exmoor ponies in the opinion of the herd owners.

None of the bodies scored lower in aggregate than the median of the scale, indicating that overall, herd owners thought all the bodies were more helpful than unhelpful. The Exmoor Pony Society scored highest for helpfulness, with the Moorland Mousie Trust not far behind. It was interesting that 14 of the 18 respondents singled out individuals (Sue McGeever and Linzi Green) as the reason they scored these two organisations highly for helpfulness. Several of the herds are small and therefore it may be inappropriate to accord the opinion of these owners as much weight as those of the larger herds. When the results are weighted for herd size the picture changes slightly:



The relative helpfulness of the EPS, ENPA, MMT, EMLP and NE weighted for numbers of ponies in each herd.

When consideration is given to the herd size, in other words when the owners of the larger herds are accorded more weight in the opinion of helpfulness, the popularity of the Exmoor Pony Society becomes relatively lower and the helpfulness of the Exmoor National Park Authority and the Exmoor Moorland Landscape Partnership increases. Amongst the larger herd owners it was clear that the reason for the relative unhappiness with the Society was generated by a number of factors: the insistence of parentage

testing by DNA analysis, which is perceived to be hugely problematic to the breeders, the increasing influence of 'non-Exmoor' people within the Society and the perceived divergence of the 'showing world' from the 'moorland world'. Although overall in the weighted results of helpfulness none of the organisations scored less than the median of the scale, when only breeders with 15 or more ponies are included, the score of the Exmoor Pony Society falls well below the median, showing that these breeders think that currently the Society is more unhelpful than helpful.

7.2 Specific problems and concerns raised by the herd owners

7.2.1. DNA parentage testing of Exmoor ponies.

The insistence by the Exmoor Pony Society on DNA parentage verification for the moorland herds divides the moorland herd owners. Of the eighteen interviewed for this project only four were of the opinion that the scheme was "excellent", "essential", "very good" and "useful". One of these respondents wanted wholeheartedly to support the scheme and expressed the view that it had been introduced with the best of intentions but that in effect it had yielded "poor results". Five more herd owners thought that the introduction and application of the scheme was "problematic", "flawed" or had "mixed feelings" about it, suggesting that they were "not sure" of its value and asked for "more discussion about it" because it had been introduced " without much debate".

The strongest feelings were expressed by those herd owners for whom the DNA scheme had clearly been difficult to implement. These nine were all farmers or farmer-related herd owners and although they represented 50% of the owners, they accounted for some 70% of the free-living ponies on the moor. They believed that the DNA scheme was "a disaster", "very bad", "a waste of time and of EPS money", "extremely problematic" and "needed to be scrapped as soon as possible". Such sentiments cannot be ignored, especially when they are expressed by the stewards of the majority of the free-living Exmoor pony genetic stock.

The Genetics Services Laboratory at the Animal Health Trust (AHT) in Newmarket is recognised as a Standard One international laboratory for purposes of parentage testing of horses. The International Society of Animal Genetics (ISAG) originally specified that nine genetic markers should be used to verify parentage in horses, but the AHT laboratory decided to reinforce the veracity of their work by testing twelve markers. More recently ISAG has determined that twelve markers should be used and the AHT laboratory has extended its testing to eighteen. Between 10,000 and 15,000 samples are tested by the laboratory each year and their work is regularly cross checked by ISAG for accuracy, in order to maintain the Standard One rating. Parentage testing services are offered to Thoroughbred and Arabian stud books from several countries, as well as many equine breed societies and sports horse registers in the UK.

The gene pool of the Exmoor Pony is very small indeed, compared with other native pony breeds and other horse breeds. There is a considerable degree of in-breeding, which has resulted in a low level of polymorphism in the markers used for parentage testing (the genetic profile of many Exmoor Ponies is very similar because they are so closely inbred). Added to this limitation upon the genetic variety within the breed is the problem of the reliability of the samples submitted. The laboratory has discovered, for instance, that they have on file up to three identical genetic profiles submitted as three different animals, when in fact they could only have come from the same animal. Similarly the records show that the laboratory has on file more than one profile for ostensibly the same stallion.

In the initial parentage testing process the laboratory is asked to verify whether a sample from a foal matches the profile for the two parents suggested by the breeder or the

Society. If this sire-and-dam combination fits with the profile from the foal, parentage is established. If it does not, the Society is asked to suggest an alternative dam or sire and these are tested. In a significant proportion of cases the alternatives do not match either and the process has to be repeated. More recently the Irish Thoroughbred parentage testing unit has developed a computer programme that is able to scan all the possible available sires and dams and to generate a schedule of the best matches. Even using this software it has not been possible to resolve a significant number of samples submitted from Exmoor Ponies because the Society or the breeders have been adamant that the sire or dam revealed by the software was not present or was dead. The result is that ponies with an absolutely characteristic Exmoor phenotype (conformation and appearance) are rejected from the stud book and offered only blue rather than cream coloured passports.

Such difficulties are not often encountered with other breeds of native pony in the UK or with horse stud-books such as the Thoroughbred or the Arabian horses. There is no doubt that the laboratory work and the computer software are reliable and the test is designed such that the chance of detecting an exclusion has a probability of 99.99%. Very occasionally a parentage test from another pony breed society will not match, but such cases are rare and the records show that they are quickly resolved. Only the free-living Exmoor Pony poses such regular and frequent difficulties and there is no doubt that the shortcomings arise from the husbandry, identification and sampling of the ponies on the moor.

Samples are regularly received that match none of the proposed stallions, which means that there must be other fertile males with access to the mares. Very occasionally samples match several possible mares because they are so closely related by in-breeding that there is insufficient polymorphism within the markers to distinguish them, but the majority of difficulties seem to stem from the inaccuracies of the original dataset linking DNA profiles to names submitted by the breeder. It appears that the samples originally submitted, when the DNA scheme was first established, included both samples and ponies that were misidentified and this misidentification has been repeated on occasions since then.

The European Decision 96/78 on equine stud-books and registration is reproduced at the end of this report. This makes it clear that parentage verification by DNA testing is not a mandatory part of stud-book maintenance. Article 3 of the Decision establishes mechanisms whereby animals that conform to the breed standards, but whose parentage is in doubt can be entered into a section of the stud-book as part of an upgrading system that enables their progeny to be incorporated fully into the stud-book subject to ‘performance’ and type. This text is reproduced exactly in the UK ‘Entry and Registration of Equidae Criteria in Stud-Books for Breeding Purposes Regulations 2003’ SL437.36, and in the Horses (Zootechnical Standards) (England) Regulations 2006 1757, which are also reproduced at the end of this report. As far as Exmoor ponies are concerned, the combined effect of the EC and UK legislation is that there is provision for typical Exmoors to be entered into the stud-book, albeit in a separate section as part of a upgrading scheme to encompass and conserve all the bloodlines that represent the Exmoor phenotype.

7.2.2. Problems with handling and husbandry at pony gatherings

A significant number of the herd owners expressed the view that the standards of handling and husbandry of the ponies at gatherings was fraught with difficulties. In previous generations there has been a collaborative ‘moorland community’ input to the gatherings, which has seen men used to handling livestock take responsibility for sorting, handling and presenting the ponies for inspection at the annual gatherings. In recent

years this community spirit has all but evaporated and the Exmoor Pony Society, together with the well-wishers, volunteers and supporters of the breed (and of Exmoor heritage) have pitched in to deal with the ponies when necessary at individual gatherings, where neighbourly assistance has been absent or spurned by the 'officials'. It is apparent from the interviews for this report that this has generated considerable ill-will.

There is manifestly a spectrum of opinion in respect of pony handling at gatherings. This ranges from the "get stuck in there and wrestle with them" attitude of some to the "be guided by the ponies' feelings" philosophy of others. Contemporary, informed attitudes to animal welfare and animal behavioural science would suggest that gathering in from the moor, sorting, handling and weaning will be very stressful processes for ponies, especially the weanlings, and should be undertaken by sensible, trained, confident and physically capable individuals who are neither sentimental not brutal towards the ponies.

One of the moorland farmer herd owners suggested early on to this report that a team of trained handlers should be available for all gatherings. They should be properly trained, equipped and paid to attend gatherings and to deal with the ponies. This would abolish the need for herd owners to be reliant upon volunteers, well wishers and "do-gooders", who in the opinion of some give rise to many of the problems at gatherings and reduce the enthusiasm for herd owners to gather their ponies. This suggestion was put to the herd owners after it was received; all of whom (11 of 18) endorsed the proposal. The prospect of having a regular and reliable team of fit, properly trained and sensitive people who are sufficiently confident and sufficiently firm and strong to be able to sort and handle the ponies efficiently would be wholeheartedly welcomed. The members of the team would have to be properly remunerated for their time and work. Health and Safety legislation would need to be considered, which could easily be satisfied by means of appropriate risk assessments, protective clothing and training. A contract of engagement would be necessary and appropriate liability insurance could be arranged. The Exmoor Pony Society benefits from at least three enthusiastic charitable or public organisations that support the ponies (Exmoor National Park Authority, Exmoor Pony Society and the Moorland Mousie Trust). One of these could provide significant benefits to the moorland farmers by organising and funding such a team. There is an abundance of experience and informed opinion in respect of correct handling of young horses and this could easily be channelled into such a scheme.

7.2.3. The lack of younger prospective moorland herd owners

The eighteen owners of the free-living moorland herds were all mature men and women. Only five of them expressed the view that there were younger members of their families living locally or coming through the family farm who would take on the responsibility for the moorland herds when the present stewards are unable to continue. Ten of them specifically raised the issue of succession: that there was no-one in their immediate family showing an interest in the ponies. This is causing some degree of concern to many of the herd owners, especially those who believe that they have peculiar, rare or valuable bloodlines in their stock. They were also perceptive enough to predict problems if 'outsiders' or 'non Exmoor' enthusiasts become aware of these difficulties and yet are the only people able and willing to step in and take responsibility for moorland herds.

This problem is once again likely to be reduced at some time to the relationship between landowners and tenants, with some input from Natural England (assuming that Environmental Stewardship remains within their remit). The moorland herds dwell upon land that is mostly in private ownership. It will be these owners who have the power and the responsibility to grant, renew or terminate grazing licenses, tenancy agreements or agricultural leases that do or do not specify Exmoor ponies – and to select their tenants, subject to inherited tenancy agreements. It will be for the Exmoor National Park Authority and the Exmoor Pony Society to discuss with the landowners the arrangements for free-

living Exmoor ponies and the relationship with future generations of Exmoor residents. The majority of the present cohort of herd owners expressed significant concern for the future of the free-living ponies, but not for the breed as a whole.

7.2.4 Hot branding

With the exception of one moorland herd owner, all the free-living Exmoor pony owners endorsed the need for a method of identification that enabled individual ponies to be identified at a distance on the moor. No alternative was proposed as an alternative to hot branding; freeze-branding was discussed by 11 of the owners, but none of these expressed the view that they preferred it to hot branding. In terms of pony numbers, this represented the owners of 97% of the free-living Exmoor ponies. Most of the owners expressed very strongly the fact that hot branding was essential for the management of the herds. Evidence from the Moorland Mousie Trust and others indicated that there was no discernable difference in temperament or responsiveness to handling between hot-branded youngsters and those unbranded. Six of the herd owners, however, questioned the need to hot-brand an animal that was definitely going to be removed from the moor and was sold to a private home: others considered this question and responded that it might be the case that the individual animal proved an exceptional success and might be turned out on the moor later in life to re-introduce of perpetuate a particular bloodline.

Figure 15. Some means of identifying free-living ponies at a distance is essential

There were numerous examples of the value of a hot brand when animals had strayed, when they were injured but still mobile or when they had been involved in a road traffic accident. The Exmoor National Park Authority rangers strongly supported hot branding as a necessary part of moorland herd management.

All parties supported the recent changes to the branding requirements, whereby hot branding over the shoulder muscles was no longer necessary and herd identification

would be by means of a simplified system of symbols. Where reservations were expressed about branding, they were limited to the efficiency and effectiveness of some branding in recent years. Views were expressed that there was a danger that concerns for 'animal welfare' had resulted in some of the people undertaking the branding losing the confidence to be bold and decisive when applying the branding iron. Several herd owners believed that the irons were not heated to sufficient temperatures and then were not applied long enough to make a prominent brand because those wielding the irons were tentative and feared 'hurting' the pony too much. It is impossible to assess the value of such criticisms, but it is certainly the case that a relatively cool iron applied for too short a time will not generate a proper brand.

The legality of branding is currently under review and the Exmoor Pony Society has gone to considerable lengths to influence the regulators in favour of the practice for free-living Exmoor ponies. There have been criticisms of ear-tagging, which is currently undertaken by a small number of farmers and which is not permitted under the Mutilations (Permitted Procedures) (England) Regulations 2007. The farmers concerned point to value of having both a brand and an ear-tag, but whether or not this is the case, neither the Exmoor Pony Society nor the National Park Authority can support the practice.

Figure 16. Ear tagging of ponies contravenes current legislation

7.2.5 The need for a 'bridge' or 'link' between unhandled Exmoor weanlings and the commercial pony market

The various routes of disposal of Exmoor pony youngstock in recent years have been described at 6.2.4., above, and the problems associated with non-Exmoors on the moor and with the registration into the stud book have been considered at 6.3.1 and 6.3.4. To summarise these problems:

- Significant numbers of foals are generated each year by free-living ponies on Exmoor.
- Because of the presence of non-Exmoor breeding stock and difficulties with the DNA parentage testing scheme a proportion of these foals cannot be entered into the Exmoor Pony Stud-book.

- There is insufficient demand for unhandled pony youngstock, even if it is registered as ‘pure’ Exmoor.Young colts and many young fillies have virtually no commercial market as riding ponies.
- There is only limited opportunity for ‘Conservation Grazing” places.

Local veterinary practices in North Devon and Somerset have been offering ‘special deals’ on colt castration in the past year, with offers such as an ‘all-in’ charge of £150 for the surgery, sedation, consumables and veterinary time. At such fee levels the veterinary businesses will be losing money, but such offers are made in the hope of attracting clients and preventing clients switching practices. A passport may currently be obtained by on-line application for as little as £18, although the application must be completed by a veterinary surgeon, who will need to insert a microchip. This will cost a minimum of £15, excluding any visit charge. Even at such levels the value of an Exmoor-type colt without proven parentage cannot cover the costs of gelding it and fulfilling the legal requirements for removing it from the moor, which is why the majority of such animals are consigned to the meat trade or killed by the knacker man. Exmoor colts with full registration into the stud-book are worth little more.

Registered, cream-passported Exmoor fillies may command prices high enough to avoid them going to slaughter, but market conditions are extremely depressed at the present time.

Exmoor ponies are, however, popular and there is a considerable measure of public goodwill towards them. The breed has been promoted by the Exmoor Pony Society, the Moorland Mousie Trust and, more recently by the Exmoor Pony Club. Although relationships between these organisations has not always been harmonious or productive, the fact that three separate bodies are active in the West Country in support of the breed must be testimony to the strength of feeling in favour of Exmoor ponies. Irrespective of the route by which they are promoted, Exmoor ponies do have a market, especially if time and effort have been invested into individual ponies so that they are at the very least handled and at best lightly backed. Three herd owners recounted recent experiences of moorland ponies being taken, handled, broken and backed by family members or friends, then offered for sale. All three herd owners were surprised to learn that the ponies had commanded prices of several hundreds of pounds after very minimal backing and riding.

The ‘Primary Aims” of the Moorland Mousie Trust are given on their website (accessed November 2013):

> Ten years ago, when the charity was founded, the simple aim was to ensure that no more foals would leave their mothers on the moor and go into the meat market. Since those early days, the work of the Trust has moved on to encompass all aspects of the Exmoor ponies’ welfare.
>
> Each Autumn we take in the surplus ponies off the moor that no-one wants to buy from the farmers. In the past, these unwanted ponies went into the meat trade being either exported, or used as animal feed. Now, through the work of The Moorland Mousie Trust, these foals can have a secure future once they have been domesticated by our experienced and very devoted staff and volunteers.

The owners of the free-living Exmoor ponies, especially the larger herds where annual gatherings have regularly resulted in annual slaughter of ponies have expressed the view that although the original intention of the Trust was extremely welcome and encouraging, the recent impact of the Trust upon the problem of unwanted foals has been disappointing. In 2012 the Trust was able to take 11 ponies. Funding is obviously an issue for a charity such as the Trust, but it is clear that providing a future for so few

ponies will do little to reduce the inevitable dispatch of many to the abattoir, kennels or knacker yard.

Moorland herd owners almost unanimously voiced the view that some kind of link or bridge between the removal of weanlings from the moor and the offer for sale of handled, ridable Exmoor ponies was desperately needed. Such a need is not new, nor is it a novel proposal, as the founders of the Moorland Mousie Trust can testify, but at present only a very limited number of ponies are processed by such means. It is regrettable that efforts to bring greater numbers of ponies off the moor and prepare them for private sale are dogged by political ill-will between the various parties proposing and undertaking this, especially when all parties appear genuinely to have the welfare of the ponies at heart.

7.2.6. The divergence of the show-type Exmoor pony from the moorland-type pony

Whether or not this fear is justified by the evidence is not for this report to judge, but the majority of Exmoor moorland breeders expressed the view that ponies bred away from the moor and bred specifically for the show ring were becoming ‘finer and fancier’ than the robust stamp of pony typical of the moorland herds. Although there are notable phenotypic differences between, for instance herd 12 ponies and herd 23 ponies in size and facial conformation, almost all the free-living Exmoor ponies are sturdy, with generous, bone, good wide chests and ‘a leg at each corner’. Scrutiny of the ponies presented at both Exford and Dunster shows in August 2013 showed that very few of the animals in the rings were of this stout, moorland character. Many were narrow, slight and fine and in marked contrast to the free-living Exmoor ponies living nearby on the moor.

Figure 17. Moorland breeders believe that Exmoor show ponies are becoming too fine and 'showy'.

7.2.6. The sentimentality about establishing a meat market for Exmoor ponies

Several contributors, including moorland herd owners, Society committee members and others expressed the view that the British aversion to eating horsemeat was both illogical and unhelpful to the free-living Exmoor ponies. As there is so limited a market for ridden ponies, show ponies and conservation grazers, why not promote the free-living Exmoor ponies as a food animal as much as an amenity or aesthetic resource? This suggestion divided moorland herd owners strongly, with some very firm and impassioned opposition to any such suggestion. Five moorland herd owners were horrified at the suggestion.

Eight were, however, strongly in favour of marketing the pony meat to local restaurants, hotels and butchers; predictably this group were predominantly the livestock farmers. The remainder were ambivalent about the idea.

Limited enquiries with visitors to the moor, who were engaged in conversation whilst ponies were being inspected for this report on the open moor suggested that the concept of a regional meat, based upon free-range or 'wild' pony herds would not by any means be rejected by tourists and might prove popular. One person interviewed for the report indicated that she had personal experience of enquiries as to whether pony meat was available locally. Committee members of the Society were not, on the whole, opposed to such considerations; indeed they were supportive of any enterprise that would provide a market for moorland ponies. Others who contacted the author and requested opportunity to contribute were strongly of the opinion that any such promotion would undermine the value of the Exmoor pony as a pleasure horse.

Whatever the opinion, the suggestion that ponies should be culled and treated in the same way as venison cannot be considered. Under EU meat hygiene regulations venison can be processed and marketed locally through the Game Meat Regulations, whilst horsemeat comes firmly within the scope of the Red Meat Regulations and must be slaughtered, processed and inspected at EU approved abattoirs.

8. POSSIBLE SOLUTIONS TO THE PROBLEMS DOCUMENTED IN THIS REPORT

8.1 Safeguarding the remaining genetic stock

It is now widely recognised that pedigree in-breeding causes genetic depression that gives rise to long-term problems in domesticated animals. Whilst it may be important to retain characteristics of native breeds that risk being lost because of specialised breeding for intensive agriculture, such fears are more justified in the case of pigs, sheep and cattle than with horses. In the case of horses and ponies, native breeds have declined in recent years because of the changes in popularity, declining demand for carriage or draught work and increases in demand for pleasure horses, riding horses and sports horses compared with working horses.

Other horse breeds and breeders have recognised and addressed the problems that arise when the inbreeding of a very limited gene-pool gives rise to a deterioration in quality. As an example, the Thoroughbred horse General Stud Book, which is maintained by Weatherbys came to two conclusions in the late 1960s; the breed was excessively inbred, leading to poor quality and there were numbers of excellent Thoroughbred- type horses excluded from the Stud Book because full parentage could not be proven. To remedy these problems the Non-Thoroughbred Register was established in 1971 to bring the blood of Thoroughbred-type quality horses into the breed. Stallions were accepted on to the Non-Thoroughbred Register by inspection and mares by performance or by the confirmed identity of one Thoroughbred parent. Animals on the Non-Thoroughbred Register are given the suffix VII because their progeny becomes eligible for promotion to the full General Stud Book after seven crosses with pure Thoroughbred horses, although progeny may race under rules from the first generation. The Non-Thoroughbred Register has now closed to new stallions but the scheme has greatly improved the robustness of the Thoroughbred gene-pool and has included bloodlines that otherwise would have been lost to racing.

The EPS is greatly and justifiably concerned about the decreasing genetic scope of the Exmoor Pony breed, which has the most limited genetic diversity of any native pony breed in the UK. Detailed analysis is undertaken to try to advise about the optimum breeding plans to maintain the scope of the breed and retain as many bloodlines as

possible. The review by Dewhurst[12] in 2005 lays out in detail the problems and proposes solutions that are still both sensible and appropriate.

The work of the Rare Breeds Survival Trust and the Geneped Analysis[16] work undertaken by Grassroots Systems Ltd show that few if any of the remaining bloodlines within the Exmoor Pony are only represented on the moor. In other words, the breed as it is presently constituted is well enough represented away from Exmoor to survive. This is commendable, but no amount of mixing of available bloodlines within the Exmoor Pony stud-book will extend or increase the current genetic material available to the breed. There are numbers of absolutely typical Exmoor-type ponies that may have the potential to boost the genetic variety of the breed even if they are, in fact, part-bred. Given the considerable problems described in Section 6.3 of this report it is clear that attempts to limit the free-living pony herds on Exmoor to registered and cream-passported animals will be extremely challenging and will almost certainly fail since they depend upon nothing more than the goodwill and co-operation of a large number of stakeholders. Notwithstanding the problems, the majority of the farmers and graziers are keen to retain 'Exmoor ponies' on the moor and it seems likely that these herds will persist.

Realistically it will be impossible under present arrangements to guarantee that only pure-bred, registered Exmoor ponies run on some parts of the moor. In the light of this, there are several options open to the Exmoor Pony Society and the moorland breeders.

Figure 18. Her future security?

8.1.1. Maintain the status quo and change nothing

The Society could maintain its current position and limit the full registration, showing and working classes of free-living Exmoor ponies only to animals whose parentage is proven by DNA testing and that meet the breed standard by inspection. This will favour moorland herds with secure boundaries, co-operative landowners, a low risk of non-Exmoor ponies being abandoned and a single stallion running with the mares. Few of the areas of the moor currently grazed by the ponies can provide guarantees of such criteria into the future and many areas have already shown that such aspirations cannot be maintained.

Refusal to countenance change will continue to alienate many of the moorland breeders and will do nothing to safeguard the genetic stock. There will be little or no point in bringing back to the moor bloodlines lost from the moorland herds. Further contraction of the genetic pool is very likely, since mares will continue to breed with abandoned or unregistered colts and their progeny will continue to be unregisterable, thereby denying the breed of the blood of the mares in question.

8.1.2. Change the breeding practices.

The social hierarchy of feral horses is based as much, if not more, upon matriarchal bands, sometimes called natal bands, as upon stallion-dominated harem groups. A stallion is frequently not the alpha-member of the band in which he lives and gender is a poor predictor of future rank in foals. Whilst several of the moorland herd owners expressed the view that the presence of stallions is absolutely essential to the well being of the herds and that social organisation of the ponies will break down if stallions do not run with the mares, this is not borne out either by research or by experience. Where mare-only, or gelding-only herds have been established there have been no apparent problems with social cohesion of the bands of ponies. There have been recent times on Exmoor when groups of mares have been deprived of a stallion because of accident or deliberately to limit breeding without any adverse effect upon the behaviour of the mares.

There is therefore no reason why the free-living Exmoor ponies should not consist entirely of groups mares, geldings and current-year foals. All breeding could be in-ground with mares selected and retained for breeding in enclosed pastures. This would have many advantages: not least the ability better to control the mixture of both maternal and paternal bloodlines. It would also enable bloodlines to be brought back to the moor that are currently absent or scarce, without the fear that the effort would be wasted because of the indiscriminate presence of undesirable males. The numbers of ponies produced would be limited, but those that are foaled would be planned and beneficial to the genetic base of the breed. Under this system, one stallion would run with a number of selected mares in-ground whilst the majority of the mares would run on the moor, together with geldings if grazing impact numbers were necessary to fulfil stewardship agreements.

The system would only function if no fertile males at all ran on the moor. This would require the co-operation of herd owners, land owners and farmers and might necessitate the dispatch by rifle of unwanted colts or stallions that were either abandoned on the moor or had escaped and proved uncatchable. As explained earlier in this report, the key to the success of such a policy and system would be the support and enthusiasm of the landowners, not the herd owners or tenant farmers. The Exmoor National Park Authority is the only stakeholder in the complicated Exmoor pony equation with sufficient influence to draw together the land owners and to persuade them of the importance of informed, sensible management of the ponies so that the rare breed can be preserved.

A great advantage of a ‘no-breeding-in-free-living-herds’ policy would be the ease of registration and entry into the stud book, as any foals generated by in-ground breeding would have parentage assented by covering certificate. DNA parentage testing would be prudent for colts retained for breeding, but fillies and geldings could enter the stud-book without this requirement and without contravening the regulations or jeopardising the breed. Full and rigorous inspection would be essential, as the current statutes and advice [11, 13, 14] emphasise the maintenance of breeding true-to-type.

The suggestion of ‘no-breeding-in-free-living-herds’ will no doubt be opposed by those who favour minimal husbandry and who would be most enthusiastic about treating the ponies as ‘wild’ stock. The proposal that no stallions should run free on the moor will be anathema to those who seek to maintain tradition and who glory in the concept of the noble wild horse of Exmoor holding, patrolling and defending his hard-fought harem of mares. Such concepts are based upon sentiment, or even folklore, but are not factual. Exmoor stallions (and other feral stallions) are frequently subordinate to an alpha mare, move between mare-controlled bands and cross-mate with mares in other groups as the opportunity arises. The practice of turning several stallions and colts out onto a communal moor or landscape will not give rise to ‘territories’ and distinctive harems. It will give rise to confusion in respect of parentage, expense to the Exmoor Pony Society and to stock that the secretary finds very difficult to register.

The farming herd owners may reject the proposal that all breeding should be in-ground because of the additional burden that this will place upon their time and effort, which are already stretched and relatively uneconomic. All the farming herd owners responded to the questionnaire by saying that the principal reason they maintained their ponies was because of ‘family tradition’, a ‘passion for the heritage of Exmoor’ and a ‘passion for the ponies’. All of them were losing money on the ponies. An in-ground-only breeding policy would generate foals that could certainly be fully registered, could be limited in number and therefore would be likely to be worth a realistic price. Fewer, but selected and intentionally bred foals, channelled through schemes that handled or even broke them to saddle or harness would generate more income than multiple, indiscriminately-bred foals that are only worth a pittance for meat. The free-living herds on the open moor, consisting only of mares and geldings would require less management than at present, as there would be no need for annual gatherings to remove the weanlings. It would be clear that any foal bred on the open moor would be by a rogue colt or stallion. It is true that visitors and tourists would be denied the pleasure of seeing foals in early summer out on the moor, but in the opinion of this report, this is a small price to pay for the benefits that would accrue from the complete control of breeding that this proposal would ensure.

A compromise between the current arrangement and the ‘no-breeding-in-free-living-herds’ policy would be the restriction to only one stallion within each ring-fenced area of moorland. At present there are significant groups of free-living ponies within which several stallions and colts are allowed to run, over extensive areas of moor – Dunkery and Withypool Common are obvious examples. Herds in different ownership mix. Boundaries are insecure. Stallions and colts are notorious for emigration from the herd with which they run for a while to another natal band. There have been many examples of stallions moving from one herd to another in recent years, not least the Herd 23 stallion Freddie (23/308) whose movements between Molland Common and West Anstey Common caused significant difficulties with both parentage registration and with the archiving of his own DNA. Where several stallions have access to mares there will be continuing problems, especially where colts are allowed to run on into their second year. The understandable rule (11b) that delays potential stallion inspections until colts are two years old means that fertile yearlings may be turned back out with the mares.

It was all these difficulties that led the Exmoor Pony Society to consider and then introduce the DNA parentage verification scheme in the hope that it would make it easy to determine which foal was by which stallion. In the event the scheme has proved much less straightforward. No other UK rare breed pony society attempts to untangle DNA parentage from herds running under feral conditions and management on the basis of annual gatherings.

If only one stallion were allowed to run with a herd on an enclosed and securely bounded area of the moor many of the DNA parentage difficulties would be avoided, but such a scheme would mean fewer breeding ponies loose on the moor, since the optimum size of a stallion-dominated harem is likely to be no more than 15-20 mares. The presence of more mares than this would result in the establishment of natal bands that may or may not have the services of the stallion when the mares were in oestrus. Such a system would best be organised by limiting the breeding stallions to one per securely-bounded area and also limiting the breeding mares, with numbers made up by the presence of geldings. This would fulfil both grazing impact requirements and exhibition of Exmoor ponies to tourists, few of whom would distinguish between mares, geldings and stallions.

The author is aware that any proposals to alter the ways in which the Exmoor ponies are managed and registered will be rejected by those who believe that the Exmoor pony is somehow unique or genetically pure, but as explained in Section 6.4. of this report, there

is no evidence for such claims. The Exmoor pony should be regarded as a valuable rare breed, not as a unique repository of prehistoric genetic material. Like other native breeds in the UK, the breed undoubtedly conserves genetic material that has been lost in northern European modern cross-breeds, but the exclusion of true Exmoor-type moorland ponies on the basis of difficulties with DNA testing will only further depress a genetic stock that is already severely inbred. Genetically linked disease has affected the Fell and the Dales ponies[14] and continued in-breeding of Exmoors has given rise to congenital ocular problems in Canada[31]. By changing management practices it will be possible to bring back to the moor bloodlines that are no longer present and to manage effectively a planned breeding programme. This will be practically impossible under present arrangements.

There will be those moorland herd owners who feel that the present system is working well, and that those who are voicing discontent are simply a few, disorganised or half-hearted breeders who cannot be relied upon to gather, accurately sample or correctly identify their ponies.This opinion that there are no real problems will be expressed by breeders of smaller herds on securely enclosed ground. They have not experienced the complications that have arisen when several stallions are allowed to run on one open area, nor yet faced the difficulties that arise when non-Exmoor colts 'appear' with the mares. The owners who are responsible for the majority of free-living Exmoor ponies and those whose ponies run on the extensive central high plateau that formed the core of the Knight estate have not expressed the view that the present system is working.

8.1.3. Declare a limited moratorium upon the DNA parentage testing and return to registration by inspection whilst breeding practices are changed

There is a significant number of ponies currently running on the moor that would clearly pass Society inspection in respect of size, colour and conformation, but which cannot be admitted to the studbook because it is or will be impossible to establish their parentage. These animals will undoubtedly have genetic material that is potentially valuable to the registered breed. The Exmoor pony suffers severely from genetic depression as a result of 'bottlenecking' and in-breeding. The requirement for establishment of parentage requires no more than a covering certificate[11, 13,] which for other rare pony breeds is frequently provided by the breeder on the basis of a stallion having run with the mares. In-hand pony breeding is not required for the provision of a covering certificate. Although the Exmoor Pony Society believes that 'farmers best knowledge' of the sire is insufficient evidence of parentage, this is precisely the system that operates acceptably for many other rare breeds under FAnGR[14] scrutiny. For example, shepherds registering Costwold sheep or Devon and Cornwall Longwool sheep believe that the ram running with the ewes is the sire of all the lambs, but it is accepted that there may be a small number of uncastrated wethers or rogue invading rams that may have covered some of the ewes. Provided the breed standard of appearance and performance is maintained, such matings do not compromise the breed.

DEFRA wrote to the Exmoor Pony Society in October 2012 after a meeting between the Society representatives and the relevant DEFRA department to enquire about registration of ponies with DNA difficulties. The wording of the reply to the enquiry is significant:

> "The only way that the ponies in question can be entered into the main section of the stud-book is if their parentage can be verified – and the way that your society do this is by DNA testing" (S Mansell. pers.comm.)

This does not state that DNA testing is mandatory or required; indeed this report has established that it is not. It is the Society that has chosen to adopt this method.

Registration by inspection and by reference to the known stallion running with the mares served the Exmoor pony breed well for nearly 100 years. There will undoubtedly have been times in the 20th century when non-Exmoor colts or unregistered mares bred on the moor and produced foals that either did or did not meet the breed standard. Rigorous inspection rejected those that failed to meet the breed standard; only ponies of acceptable appearance and type were admitted to the stud book. The breed survived and flourished thanks to the Society, which maintained the stud-book and trained inspectors without reference to DNA.

At the present time there are more difficulties than may have been the case formerly. There has been significant non-Exmoor breeding within the moorland herds. At the very least the Society should consider establishing an upgrading scheme, whereby Exmoor fillies of true type and character but of uncertain parentage are entered into a section of the studbook that enables them to enter all Exmoor classes without discrimination and by which their progeny, after an appropriate number of generations breeding true-to-type are admitted into Section I of the main studbook. Geldings of true type and character could be admitted immediately, since they will have no further influence upon the genetics of the breed. All Exmoor breeding males should continue to have their parentage confirmed by DNA testing, which would then become part of the stallion licensing and inspection process. Under present statutes there is no barrier to introducing completely new blood to the breed by admitting a registered pony from another breed stud-book, subject to inspection[13]. This illustrates the fact that international equine scientists, who advise legislators, recognise that all domesticated horse breeds are closely related and that continued in-breeding within a closed stud-book may become unhealthy.

If the re-organisation of breeding practices outlined at 8.1.3 above is adopted, so that that there is far less ambiguity about which stallion is running with which mares and all parties co-operate in restricting the presence of unwanted fertile males, the DNA parentage testing scheme could be re-designed to suit the new arrangements after an appropriate period. This might be several years, but it will be essential to sample all breeding animals, males and females, to establish a new foundation dataset for the Exmoor pony breed, as the present data has proved so unreliable. This does not mean that all moorland Exmoors will need to be re-sampled: colts would be sampled at registration, mares would be re-sampled when they were kept in-ground for breeding and current stallions re-sampled when they were retained to be turned out in-ground with the mares, and, to be prudent, re-checked for DNA identity when they were moved between herds. Geldings and moorland mares that were not breeding need not be DNA sampled.

The temporary moratorium upon DNA testing will no doubt be opposed by the Exmoor Pony Society. The Society has expended considerable effort and expense on the scheme with the very best of intentions. For a breed society managing a stud-book in which the controlled breeding of enclosed or captive horses is recorded, DNA parentage testing provides an excellent tool for verifying parentage; indeed the tests were introduced to the horse breeding world to limit fraud (or ‘error’) on the part of breeders such as Thoroughbred breeders because of the temptation to declare that a more desirable sire had been put to a mare than was actually the case. DNA parentage testing also cross-references and reconciles the true identity of sires when frozen or chilled semen is sent around the world for artificial insemination. It is not, however, a straight-forward answer to the problems that arise when a small, inbred population of horses is allowed to breed freely with little control of the fertile males running with the mares.

When moorland Exmoor pony breeding is better managed and single-sire mare bands can be guaranteed, the DNA scheme will work as well as it does for all the other native pony and horse breeds whose samples pass through the Newmarket laboratory.

8.1.4. Promote the free-living Exmoor ponies as a food-producing animal

This will not be discussed in detail, but as it has been repeatedly raised, the cost-benefit analysis of undertaking such promotion might be worthy of consideration.

The mention of the possibility of promoting the free-living Exmoor ponies as food-producing animals will inevitably invoke reactions of horror and disgust in those opposed to meat-eating in general and horsemeat consumption in particular. This report takes no view of the morality or ethics of such suggestions but it must record that the subject is regularly raised.

9. CONCLUSION

This report has been researched and written with the interests of the Exmoor pony at heart and with every possible effort to remain objective and impartial in the face of both lobbying and politics. All parties acknowledge the value of the free-living Exmoor ponies to the region and to the equine landscape of the UK.

At the very least this report has established two basic facts:

- The present systems of management, husbandry and registration of the free-living Exmoor ponies are unhelpful to the future security of the breed on the moor.

- No single party in the complicated relationship that controls the free-living Exmoor ponies has the authority, ability or mandate to improve the outlook for the ponies alone.

10. ACKNOWLEDGEMENTS

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Particular notice must be paid to five specialists who have kindly assisted with parts of the report to ensure that it is accurate and reflects the correct interpretation of the information acquired by the research:

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II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION DECISION

of 10 January 1996

laying down the criteria for entry and registration of *equidae* in stud-books for breeding purposes

(Text with EEA relevance)

(96/78/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 90/427/EEC of 26 June 1990 on the zootechnical and genealogical conditions govering intra-Community trade in *equidae* [1], and in particular Article 4 (2) (b) thereof,

Whereas under Article 4 (2) (b) of Directive 90/427/EEC the harmonized criteria govering the entry of *equidae* in stud-books should be established ;

Whereas it is therefore necessary to lay down the criteria for the entry of *equidae* in stud-books for breeding purposes ;

Whereas precise conditions relating to lineage and identification must be met prior to entry in the stud-book ;

Whereas allowance should be made for the division of the stud-book into different sections and classes so that certain types of animals will not be excluded ;

Whereas the measures provided for in this Decision are in accordance with the opinion of the Standing Committee on Zootechnics,

HAS ADOPTED THIS DECISION :

Article 1

1. To qualify for entry in the main section of the stud-book of its breed registered equidae must :

— be descended from parents entered in the main section of a stud-book of that same breed and have a pedigree established in accordance with the rules of that stud-book,

— be identified as foal at foot according to the rules of that stud-book, which at least should require the covering certificate.

2. In derogation from the first indent of paragraph 1, an animal can be entered in the main section to take part in a cross breeding programme approved by the organization or association according to the rules of that stud-book. The cross breeding programme should mention the breeds which are allowed to take part.

Article 2

1. The main section of a stud-book may be divided in conformity with No 3 (b), fifth indent, of the Annex of Commission Decision 92/353/EEC [2] laying down the criteria for the approval or recognition of organizations and associations which maintain or establish stud-books for registered *equidae* into several classes according to the animals' merits. Only *equidae* meeting the criteria laid down in Article 1 may be entered in one of those classes.

[1] OJ No L 224, 18. 8. 1990, p. 55.

[2] OJ No L 192, 11. 7. 1992, p. 63.

2. Where a stud-book contains several classes in the main section, an animal from another stud-book shall be entered in the class of the stud-book whose criteria it meets.

Article 3

1. An organization or association keeping a stud-book may decide that an animal, which does not meet the criteria laid down in Article 1, may be entered in a supplementary section of that stud-book. The animal must meet the following requirements:

— be identified in accordance with the stud-book rules,

— be judged to conform to the breed standard,

— have a minimum performance as laid down in the stud-book rules.

2. The organization or association should fix the rules allowing progeny of such animals to enter the main section.

Article 4

This Decision is addressed to the Member States.

Done at Brussels, 10 January 1996.

For the Commission

Franz FISCHLER

Member of the Commission

STATUTORY INSTRUMENT 2006 No. 1757 ANIMALS, ENGLAND The Horses (Zootechnical Standards) (England) Regulations

The Secretary of State is designated(a) for the purposes of section 2(2) of the European Communities Act 1972(b) in relation to the common agricultural policy of the European Community.

Exercising the powers conferred on him by that section, he makes the following Regulations—

PART 1 General Provisions

Title, application and commencement

1.(1) These Regulations may be cited as the Horses (Zootechnical Standards) (England) Regulations 2006.

(2) These Regulations apply in England only and come into force on 28th July 2006.

Interpretation

2.(1) In these Regulations—

"horse" means an animal of the equine or asinine species or crossbreeds of those species, but does not include zebras.

"recognised organisation" means an organisation or association which—

(a) maintains or establishes a stud book in which horses are entered or registered; and

(b) has been recognised for this purpose under regulation 3.

"stud book" means any book, register, file or data medium—

(a) which is maintained by a recognised organisation; and

(b) in which horses are entered or registered with mention of all their known ancestors.

PART 2 Recognition of Organisations

Criteria for recognition

3.(1)In order to become recognised as a recognised organisation, an organisation or association must—

(a) submit an application for recognition as a recognised organisation to the Secretary of State;

(b) maintain or establish a stud book; and

(c) satisfy the criteria referred to in the Schedule to these Regulations.

(2) Subject to regulation 4, the Secretary of State must recognise any organisation or association which satisfies the criteria set out in paragraph (1).

Refusal to recognise and withdrawal of recognition from organisations

4.(1) The Secretary of State must refuse to recognise, or must withdraw recognition from, an organisation or association which—

(a) fails to satisfy the criteria for recognition set out in regulation 3(1);

(b) fails to comply with regulation 6; or

(c) fails to comply with regulation 7.

(2) Where a recognised organisation already exists in respect of a particular breed of horse, the Secretary of State may refuse to recognise an organisation or association representing the same breed of horse if—

(a) he considers that recognising the organisation or association would—

(i) endanger the preservation of that breed of horse;

(ii) jeopardise the operation of the existing recognised organisation; or

(iii) jeopardise the improvement or selection programme of the existing recognised organisation; or

(b) an existing recognised organisation allows horses of that breed to be entered in a section of its studbook which it maintains in accordance with the rules laid down by the recognised organisation maintaining the stud book of the origin of that breed.

(3) Where the Secretary of State refuses to recognise, or withdraws recognition from, an organisation or association in accordance with paragraph (1) or (2), the reasons for that refusal or withdrawal must be given to that organisation or association in writing.

Representations to the Secretary of State

5.(1) A person may make representations in writing against a refusal to recognise, or a withdrawal of recognition from, an organisation or association under regulation 4 to a person appointed for the purpose by the Secretary of State.

(2) The appointed person must consider the representations and report in writing to the Secretary of State.

(3) The Secretary of State must give written notification of his final determination and the reasons for it.

PART 3 Form and Content of Stud Book

Division of main section of stud book

6. A recognised organisation must not divide the main section of its stud book except into

different classes according to the horses' merits.

Compulsory entry in main section of stud book

7.(1) A recognised organisation must enter a horse in the main section of its stud book if that horse—

(a) is descended from parents entered in the main section of a stud book of the same breed;

(b) has a pedigree established in accordance with the rules of its stud book; and

(c) is identified as foal at foot in accordance with the rules of its stud book, which rules must at least include a requirement for a covering certificate.

(2) Where a horse is eligible for entry in a supplementary section of a stud book in accordance with the criteria set out in regulation 8, a recognised organisation must allow the progeny of that horse to be entered in the main section of its stud book.

Entry in supplementary section of stud book

8. Where a horse does not satisfy the criteria set out in regulation 7(1), a recognised organization may enter that horse in a supplementary section of its stud book if that horse—

(a) has been identified in accordance with the rules of its stud book;

(b) is judged by the recognised organisation to conform to the breed standard; and

(c) meets the requirements for minimum performance set out in the rules of its stud book.

Cross breeding programmes

9. Where a horse does not satisfy the criteria set out in regulation 7(1), a recognised organisation may enter that horse in the main section of its stud book for the purpose of it taking part in a cross- breeding programme which—

(a) has been approved by that organisation in accordance with the rules of its stud book; and

(b) specifies the breeds which are allowed to take part in that programme.

Entry of horses registered in other stud books

10. Where a recognised organisation—

(a) receives a request from the owner of a horse registered in another stud book to enter that horse in the main section of its own stud book; and

(b) has divided the main section of its stud book in accordance with regulation 6,

the recognised organisation must enter the horse into the class of its stud book whose criteria that horse meets.

Revocation

11. The Horses (Zootechnical Standards) Regulations 1992(a) are revoked in England only.

Food and Rural Affairs

SCHEDULE Regulation 3 Criteria for Recognition

Operation of recognised organisations

1.(1) An organisation or association which maintains or establishes a stud book of the origin of a breed, must have established—

(a) a system for recording pedigrees and the ability to carry out the checks necessary for recording pedigrees;

(b) a system for identifying horses;

(c) a definition of the characteristics of the breed covered by the stud book;

(d) a definition of its basic objectives of selection; and

(e) lineages entered in one or more other stud books, where necessary.

(2) An organisation or association which maintains or establishes a stud book, but does not maintain the stud book of the origin of the breed, must comply with the principles established under sub–paragraph (1) by the organisation or association which maintains the stud book of the origin of the breed.

(3) Any organisation or association which maintains or establishes a stud book must satisfy the Secretary of State that it operates efficiently.

Improvement and selection programmes

2. An organisation or association which maintains or establishes a stud book must—

(a) have registered a sufficient number of horses to carry out an improvement or selection programme or to preserve the breed where this is considered necessary;

(b) be able to provide the data necessary to carry out an improvement, selection or preservation programme; and

(c) have established a system for providing data whereby horses can be evaluated for the purpose of improvement, selection and breed preservation.

Non-discriminatory treatment of breeders

3.(1)Subject to sub–paragraph (2), an organisation or association which maintains or establishes a stud book must have rules of procedure which provide for non-discriminatory treatment of breeders.

(2) Where several organisations or associations already exist within the territory of the Community in respect of a particular breed, the rules of procedure of an organisation or

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations, which apply in England only, implement Commission Decision 92/353/EEC (OJ No. L 192, 11.07.1992, p. 63) and Commission Decision 96/78/EC (OJ No. L 19, 25.01.1996, p. 39). They revoke and replace The Horses (Zootechnical Standards) Regulations 1992 (S.I. 1992/3045).

These Regulations specify the criteria which an organisation or association must satisfy in order to become recognised by the Secretary of State for the purpose of maintaining a stud book (regulation 3(1) and the Schedule to these Regulations). Any organisation or association which satisfies these criteria must be granted official recognition (regulation 3(2)).

Regulation 4 sets out the circumstances in which the Secretary of State must and may refuse to grant recognition to, or withdraw recognition from, an organisation or association. Any such refusal or withdrawal must be communicated to the organisation in writing.

Regulation 5 allows a person to make representations to the Secretary of State where recognition has been refused or withdrawn under regulation 4.

Regulation 6 permits a recognised organisation to divide the main section of its stud book into different classes according to the horses' merits, but prohibits it from doing so for other purposes.

Regulation 7 specifies the circumstances in which a recognised organisation must enter a horse in the main section of its stud book.

A recognised organisation is permitted to enter a horse in a supplementary section of its stud book where that horse meets certain minimum criteria (regulation 8); to enter a horse in the main section of its stud book to take part in a cross-breeding programme (regulation 9); and to enter a horse registered in another stud book in the main section of its own stud book (regulation 10).

A regulatory impact assessment has not been prepared for these Regulations on the grounds that they do not impose significant burdens on existing organisations, or require such organisations to alter their existing procedures to a significant extent.

SUBSIDIARY LEGISLATION 437.36

ENTRY AND REGISTRATION OF EQUIDAE CRITERIA IN STUD-BOOKS FOR BREEDING PURPOSES REGULATIONS

[S.L.437.36 1

LEGAL NOTICE 330 of 2003.

1. (1) The title of these regulations is the Entry and Registration of Equidae Criteria in Stud-Books for Breeding Purposes Regulations.

(2) The scope of these regulations is to implement the provisions of European Union Commission Decision 96/78/EEC laying down the criteria for entry and registration of equidae in stud-books for breeding purposes. This Decision finds its legal basis under 90/427/EEC, article 4 (2)(b).

2. (1) To qualify for entry in the main section of the stud- book of its breed registered equidae must -

1. (a) be descended from parents entered in the main section of a stud-book of that same breed and have a pedigree established in accordance with the rules of that stud- book,
2. (b) be identified as foal at foot according to the rules of that stud-book, which at least should require the covering certificate.

(2) In derogation of subregulation (1)(a), an animal can be entered in the main section to take part in a cross breeding programme approved by the organisation or association according to the rules of that stud-book. The cross breeding programme should mention the breeds which are allowed to take part.

3. (1) The main section of a stud-book may be divided in conformity with paragraph 3(b), fifth indent, of the Annex of European Union Commission Decision 92/353/EEC laying down the criteria for the approval or recognition of organisations and associations which maintain or establish stud-books for registered equidae into several classes according to the animals' merits. Only equidae meeting the criteria laid down in regulation 2 may be entered in one of those classes.

(2) Where a stud-book contains several classes in the main section, an animal from another stud-book shall be entered in the class of the stud-book whose criteria it meets.

4. (1) An organisation or association keeping a stud-book may decide that an animal, which does not meet the criteria laid down in regulation 2, may be entered in a supplementary section of that stud-book. The animal must meet the following requirements:

(a) be identified in accordance with the stud-book rules;

(b) be judged to conform to the breed standard;

(c) have a minimum performance as laid down in the stud- book rules.

(2) The organisation or association should fix the rules allowing progeny of such animals to enter the main section.

STATUTORY INSTRUMENTS(2009) No. 1611 ANIMALS, ENGLAND The Horse Passports Regulations 2009

CONTENTS

. Powers of entry

. Obstruction

. Penalties

. Offences by bodies corporate

. Offences by partnerships and unincorporated associations

. Revocations

SCHEDULE — Dartmoor, Exmoor and the New Forest

PART 1 Introduction

Citation, application and commencement

1. These Regulations may be cited as the Horse Passports Regulations 2009; they apply in England and come into force on 1st August 2009.

Meaning of "horse" and "passport"

2. In these Regulations—

. (a) "horse" means wild or domesticated solipeds within the genus Equus of the family Equidae, and their crosses, and

. (b) "passport" means the identification document for the identification of a horse in accordance with Commission Regulation (EC) No. 504/2008 (implementing Council Directives 90/426/EEC and 90/427/EEC as regards method of identification of equidae(c)).

PART 2 Enforcement of Commission Regulation (EC) No. 504/2008

Competent authority for Commission Regulation (EC) No. 504/2008

3. The Secretary of State is the competent authority for the purposes of Commission Regulation (EC) No. 504/2008 and acts as the member State for the purposes of that Regulation.

Sale of horses

4.(1) An owner who sells a horse must give its passport to the buyer at the time of the sale.

(2) The buyer must notify the transaction to the passport issuing organisation for registration of the new ownership within 30 days, and include—

(a) the buyer's name and address, and

(b) the identification of the horse.

(3) In this regulation "sell" includes any transfer of ownership.

(4) Failure to comply with this regulation is an offence.

Passports

5.(1) The owner of a horse and, if different, the keeper who has primary responsibility for it who fail to comply with Article 3(1) of Commission Regulation (EC) No. 504/2008 are guilty of an offence.

(2) In accordance with Article 5(5) of that Regulation—

(a) only an owner may apply for a passport, and

(b) the owner must apply for a passport within the time limits set out in Article 5, and failure to do so is an offence.

(3) If an application for a passport is received outside the time limits, the passport issuing organisation must stamp the passport that the horse is not intended for slaughter for human consumption.

Application for duplicate and replacement passports

6. Any person who applies for a duplicate or replacement passport in contravention of Article 5(8) of Commission Regulation (EC) No. 504/2008 is guilty of an offence.

Importation

7. The owner of a horse who—

(a) fails to comply with Article 8(1) of Commission Regulation (EC) No. 504/2008 (identification of imported horses), or

(b) fails to request a passport issuing organisation within 30 days of importation to act in accordance with Article 8(2) of that Regulation (provision of additional information),

is guilty of an offence.

Detecting previous active marking of horses

8. A veterinary surgeon who, in implanting a transponder into a horse, who fails to carry out the procedures set out in Article 10(1) of Commission Regulation (EC) No. 504/2008 (measures to detect previous active marking) is guilty of an offence.

Transponders

9.(1) A passport issuing organisation that fails to comply with Article 11(1) of Commission Regulation (EC) No. 504/2008 (implantation of a transponder) is guilty of an offence.

(2) The minimum qualification for implanting a transponder for the purposes of that Article is membership of the Royal College of Veterinary Surgeons.

Accompanying documentation

10.(1) The owner of a horse and, if different, the keeper who has primary responsibility for it who fail to comply with—

(a) Article 13(1) of Commission Regulation (EC) No. 504/2008 (movement and transport),

(b) Article 14(1) of that Regulation (smart cards), or

(c) Article 14(3) of that Regulation (temporary documents),

are guilty of an offence.

(2) A smart card must be in a format approved by the Secretary of State under this regulation, and the Secretary of State must only authorise a smart card on being satisfied that it will operate effectively.

Movement to slaughter

11. The owner of a horse and, if different, the keeper who has primary responsibility for it who fail to comply with Article 15(1) of Commission Regulation (EC) No. 504/2008 (movement to slaughter) are guilty of an offence.

Issue of duplicate and replacement passports

12.(1) A passport issuing organisation that fails to stamp a passport as a duplicate, or classify the animal as being not intended for slaughter for human consumption, in accordance with Article 16(1) of Commission Regulation (EC) No. 504/2008, is guilty of an offence.

(2) The derogation in Article 16(2) of that Regulation may not be exercised.

(3) A passport issuing organisation that issues a replacement passport other than in accordance with Article 17 of that Regulation (issuing replacement documents) is guilty of an offence.

Procedure on death

13.(1) When a horse is slaughtered or killed for disease control purposes, the official veterinary surgeon responsible for the slaughter or killing must, in accordance with Article 19(2)(a)(i) of Commission Regulation (EC) No. 504/2008, return the passport to the passport issuing organisation as soon as is reasonably practicable.

(2) When a horse is slaughtered for human consumption, in accordance with Article 19(2)(a)(ii) of that Regulation the occupier of the slaughterhouse must give the passport to the official veterinary surgeon at the slaughterhouse, who must record the identification number of the animal, mark the passport accordingly and send the marked passport to the passport issuing organisation as soon as is reasonably practicable.

(3) In any other case, notwithstanding Article 19(2)(b) of that Regulation, the keeper must return the passport to the passport issuing organisation within 30 days of the death of the horse, and failure to do so is an offence.

(4) The return of the passport under this regulation is the attestation required under Article 19(1)(c) of that Regulation.

Procedure by the passport issuing organisation on death

14. When a passport issuing organisation is notified of the death of a horse, it must invalidate the passport and ensure that the transponder number cannot be re-used, in accordance with Article 19(1)(a) and (b) of Commission Regulation (EC) No. 504/2008, but it may return the invalidated passport to the owner.

Treatment with a veterinary medicinal product

15.(1) A veterinary surgeon who fails to comply with Article 20 of Commission Regulation

(EC) No 504/2008 is guilty of an offence.

(2) A veterinary surgeon who fails to enter into a passport the details required in section V, VI, VII or IX of the passport is guilty of an offence.

Databases

16.(1) A passport issuing organisation that fails to comply with Article 21 of Commission Regulation (EC) No. 504/2008 (records on a database) is guilty of an offence.

(2) For the purposes of Article 21(3) of that Regulation, the communication of the information to the central database must be made in accordance with a written notice served on the passport issuing organisation by the Secretary of State.

Prohibitions

17. It is an offence to—

(a) destroy or deface a passport;

(b) alter any entry in a passport; or

(c) be in possession of a passport knowing it to be forged.

Dartmoor, Exmoor and the New Forest

18. The Schedule makes provision for Dartmoor, Exmoor and the New Forest.

PART 3 Powers and penalties

Enforcement

19. These Regulations are enforced by the following local authorities—

(a) in any part of England where there is, within the meaning of the Local Government Changes for England Regulations 1994(a), a unitary authority for that local government area, that authority;

(b) where there is not a unitary authority—

(i) in a metropolitan district, the council of that district;

(ii) in a non-metropolitan county, the council of that county; or

(iii) in each London borough, the council of that borough;

(c) in the City of London, the Common Council.

Powers of entry

20.(1) An inspector may, on producing a duly authenticated authorisation if required, at all reasonable hours, enter any premises (excluding any premises not containing any horse and used only as a dwelling) for the purpose of administering and enforcing these Regulations; and in this regulation “premises” includes any vehicle or container.

(2) An inspector may—

(a) require the production of a passport and mark it as necessary;

(b) carry out any inquiries;

(c) have access to, and inspect and copy any documents or records (in whatever form they are held) relevant to these Regulations, and remove them to enable them to be copied;

(d) inspect and check the operation of any computer and any associated apparatus or material that is or has been in use in connection with documents or records; and

(e) mark any horse for identification purposes.

(3) Where an inspector has entered any premises and it is not reasonably practicable to determine whether documents on those premises are relevant to these Regulations, the inspector may seize them to ascertain whether or not they are relevant.

(4) The inspector may be accompanied by—

(a) such other persons as the inspector considers necessary, and

(b) any representative of the European Commission acting for the purpose of the enforcement of a Community obligation.

(5) It is an offence to deface, obliterate or remove any mark applied under this regulation except under the written authority of an inspector.

(6) In this regulation and regulation 21 “inspector” means a person appointed as such by a local authority or the Secretary of State for the enforcement of these Regulations or under the Animal Health Act 1981(a).

Obstruction

21. It is an offence—

(a) intentionally to obstruct an inspector acting in the execution of these Regulations;

(b) without reasonable cause, to fail to give to an inspector acting in the execution of these Regulations any assistance or information that that person may reasonably require under these Regulations;

(c) to furnish to any person acting in the execution of these Regulations any information knowing it to be false or misleading; or

(d) to fail to produce a document, record or passport when required to do so to any person acting in the execution of these Regulations.

Penalties

22. A person guilty of an offence under these Regulations is liable—

(a) on summary conviction, to a fine not exceeding the statutory maximum, or

(b) on conviction on indictment, to a fine.

Offences by bodies corporate

23.(1) Where a body corporate is guilty of an offence under these Regulations, and that offence is proved to have been committed with the consent or connivance of, or to have been attributable to any neglect on the part of—

(a) any director, manager, secretary or other similar person of the body corporate, or

(b) any person who was purporting to act in any such capacity,

that person, as well as the body corporate, is guilty of the offence.

(2) In this regulation "director", in relation to a body corporate whose affairs are managed by its members, means a member of the body corporate.

Offences by partnerships and unincorporated associations

24.(1) Proceedings for an offence under these Regulations alleged to have been committed by a partnership or an unincorporated association may be brought in the name of the partnership or association.

(2) For the purposes of such proceedings—

(a) rules of court relating to the service of documents are to have effect as if the partnership or association were a body corporate;

(b) section 33 of the Criminal Justice Act 1925(a) and Schedule 3 to the Magistrates' Courts Act 1980(b) apply in relation to the partnership or association as they apply in relation to a body corporate.

(3) A fine imposed on a partnership or association on its conviction for an offence under these Regulations is to be paid out of the funds of the partnership or association.

(4) Where an offence under these Regulations committed by a partnership is proved to have been committed with the consent or connivance of, or to be attributable to any neglect on the part of, a partner, that partner (as well as the partnership) is guilty of the offence and is liable to be proceeded against and punished accordingly.

For these purposes, "partner" includes a person purporting to act as a partner.

(5) Where an offence under these Regulations committed by an unincorporated association is proved to have been committed with the consent or connivance of, or to be attributable to any neglect on the part of, an officer of the association, that officer (as well as the association) is guilty of the offence and is liable to be proceeded against and punished accordingly.

For these purposes, "officer" means an officer of the association or a member of its governing body, or a person purporting to act in such capacity.

Revocations

25. The Horse Passports (England) Regulations 2004(c) are revoked.

SCHEDULE Regulation 18 Dartmoor, Exmoor and the New Forest

Application of this Schedule

1.(1) The derogation in Article 7 of Commission Regulation (EC) No. 504/2008 applies in relation to horses—

(a) identified in the lists kept by the Verderers of the New Forest(d) or entered in the stud-book of the New Forest Pony Breeding and Cattle Society(e);

(b) identified in the lists kept by the Dartmoor Commoners' Council(a); or

(c) entered in the stud book of the Exmoor Pony Society.

(2) Dartmoor, Exmoor and the New Forest, are designated for the purposes of Article 7 of Commission Regulation (EC) No. 504/2008 ("designated areas") as areas containing defined populations of horses living under wild or semi-wild conditions that do not need to be identified with passports while they remain within the designated area.

(3) For the purposes of this Schedule these are the areas designated in maps marked as such(b) and deposited at the offices of the Secretary of State for Environment, Food and Rural Affairs, Nobel House, 17 Smith Square, London SW1P 3JR.

Veterinary treatment

2. If a horse without a passport in a designated area is treated with any veterinary medicinal product the owner must ensure that it is fully identified and implanted with a transponder in accordance with Commission Regulation (EC) No. 504/2008 within 30 days of treatment, and failure to do so is an offence.

Movement off the designated area

3.(1) It is an offence to move a horse without a passport off the designated area (other than temporarily for welfare reasons) unless the horse is marked with a sticker issued by a passport issuing organisation dated with the date on which it was attached to the horse and bearing a unique identification number.

(2) Unless the horse is aged under 12 months and is being taken for slaughter for human consumption it must also be accompanied by a passport application containing its silhouette and the number of the identifying sticker.

(3) The person moving the horse must take it directly to the holding of destination outside the designated area.

(4) Within 30 days of arrival at the holding of destination the owner must apply for a passport for it, and failure to do so is an offence (this does not apply in the case of a horse taken to a slaughterhouse for slaughter for human consumption, but it is an offence to slaughter such a horse more than seven days after the date on the identifying sticker).

(5) It is an offence to move the horse off the holding of destination until it has received a passport.

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations enforce Commission Regulation (EC) No. 504/2008 in England. They provide for identification of horses, and replace the Horse Passports (England) Regulations 2004.

Part 2 of the Regulations create offences for breach of provisions of the Commission Regulation, and provide for the administration of veterinary medicinal products for horses intended for human consumption. The Schedule makes special provisions for Dartmoor, Exmoor and the New Forest.

Part 3 provides that the Regulations are enforced by the local authority, and gives powers to inspectors of those authorities.

Breach of the Regulations is an offence punishable—

(a) on summary conviction, to a fine not exceeding the statutory maximum, or

(b) on conviction on indictment, to a fine.